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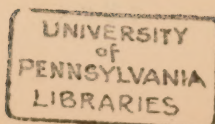
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SATURDAY, OCTOBER 3, 1874.

ORIGINAL COMMUNICATIONS.

CASE OF COMPOUND COMMINUTED FRACTURE OF THE SKULL,

INVOLVING THE LEFT TEMPORAL, SPHENOID, AND SUPERIOR MAXILLARY BONES; LACERATION OF THE BRAIN; PARALYSIS OF THE FIRST, SECOND, THIRD, FOURTH, FIFTH, SIXTH, AND SEVENTH CRANIAL NERVES; RECOVERY; WITH EXPERIMENTS UPON THE IRIS; DEATH THREE MONTHS AFTER THE INJURY, FROM ABSCESS OF THE BRAIN.—WITH REMARKS.

BY THOMAS G. MORTON, M.D.,

One of the Attending Surgeons to the Pennsylvania Hospital.

W. H., aged 47, was brought to the Pennsylvania Hospital as a "recent accident," late in the afternoon of the 24th of July, 1873. No reliable account of the case could be obtained at the time of his admission; but it was afterwards ascertained that the man had left Phoenixville on a coal-train the evening before, a collision occurred, and he was thrown from the train, and found some hours

afterwards in an unconscious state. On admission, the left temporal bone was found terribly comminuted, presenting an opening an inch and a half in diameter, with an extensively lacerated dura mater; numerous fragments of bone were removed from the brain itself. The fracture extended deeply into the petrous portion of the temporal bone, and apparently involved to a considerable extent the base of the cranium; large lacerations were found involving the ear and side of the head, and several teeth had been broken off. Profound coma was present during the succeeding ten days; when a gradual improvement was observed, and paralysis was found on the left side of the face. On being questioned concerning the accident, his answers were variable and quite unsatisfactory. Very great swelling of the face continued for a fortnight or so, and then slowly subsided. The wound suppurated freely, without any disposition to fungus of the brain; the centre of the cornea showed a superficial abrasion. The conjunctiva from the first was congested and markedly oedematous, and the pupil considerably dilated.

FIG. 1.



FIG. 2.



August 30.—There is complete facial palsy on the left side (Fig. 1). The wound has almost closed up. A fistulous track extends from the external ear inwards and forwards; a probe passed in joins a fistulous track from the main wound, and passes directly forward and inward some two inches (Fig. 2). The general condition of the patient is excellent; headache has been a marked symptom, but of late has been considerably less. He walks about as usual, going to and from the hospital; has some difficulty in masticating and swallowing his food; his intellect is probably as clear as before the accident.

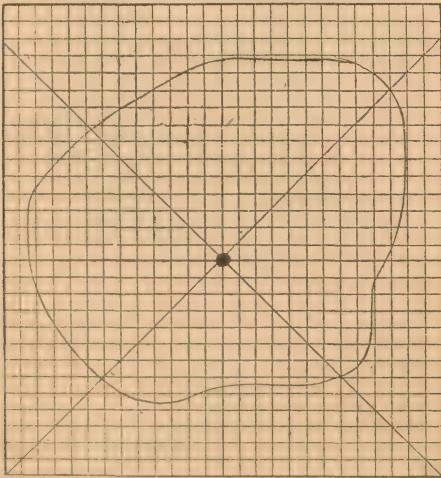
September 3.—Examination made in the presence

of Drs. William Hunt, H. C. Wood, and others. The cranial nerve-distribution on the right side is normal. On the left side, the first, second, third, fourth, fifth, sixth, seventh, and possibly the ninth nerves are palsied. Irritants and odorous substances, cologne, vinegar, and ammonia, when applied to the left nostril are not perceived. The left eye is stone-blind, is absolutely motionless, and totally devoid of sensibility. The mucous membrane of the lids is also insensitive. The pupil is moderately and regularly dilated, measures one-fifth of an inch in diameter, and does not respond to light. The optic papilla presents white atrophy.

The conjunctiva is passively congested, and slightly œdematous. The cornea is normal, except a superficial central opacity; the lachrymal secretion is slight, and not increased in the least by irritants applied to the conjunctiva. The globe of the eye projects half an inch beyond the right; there is complete ptosis. Anæsthesia exists over the face and brow; sensation exists on the outer edge of the upper eyelid and on the skin of the temple and ear; the muscles of the left side of the face are palsied; the auditory nerve is susceptible of impressions, but these are very imperfectly conducted. There is loss of taste on the left side of the tongue, and absence of sensation of the mucous membrane of this side of the mouth, fauces, tongue, and palate. The line of skin-anæsthesia is measured from a trifle within the median line on the left side of the face, extending along the nose to the upper lip, and outward two inches beyond the corner of the mouth, then upward to a point near the angle of the eye, where sensation exists. The anæsthesia in the brow corresponds to the distribution of the supra-orbital nerve. The cornea has been very superficially abraded in the centre; the conjunctiva when examined two days after the accident was found very much congested, and this condition remains to the present time, with slight œdema. To test the absence of lachrymal secretion, the upper eyelid was securely held open for an hour, at the end of which time the conjunctiva and globe of the eye were intensely congested, and of a purplish-red color. The cornea and conjunctiva were absolutely dry, and it was deemed prudent not to continue the exposure any longer, for fear of permanent injury.

The right eye showed normal acuity of vision, with a presbyopia = $\frac{1}{4}$; but the field of vision is much contracted (Fig. 3).

FIG. 3.



EXPERIMENTS UPON THE PALSIED EYE.

September 4.—The eyeball is absolutely motionless and insensitive; the pupil one-fifth of an inch in diameter; no effect is produced on the iris by light. A solution of atropia, gr. ij to f3i, applied. In ten minutes the pupil measured one-fourth of an inch, and is regularly dilated.

September 9.—Extract of Calabar bean applied to the conjunctiva; the pupil one-fifth of an inch in diameter; in half an hour the pupil contracted to one-twentieth of an inch.

September 13.—The contracted condition continued for two days, and gradually passed away; the pupil has resumed its dilatation of one-fifth of an inch.

September 20.—Pupil one-fifth of an inch. One-fortieth of a grain of atropia was injected into the patient's arm, with no effect upon either pupil.

September 22.—One-thirtieth of a grain of atropia was injected, with no effect upon either eye; no constitutional symptoms.

September 23.—The right pupil measured one-eighth, the left one-fifth of an inch. One-twentieth of a grain of atropia was injected; in fifteen minutes there was some dryness of the throat, with unsteadiness in walking, dilatation of the pupil of the left eye, and very appreciable enlargement of the right pupil. In three hours the right pupil measured three-sixteenths, the left one-fourth of an inch.

October 1.—During the past few days intense and continued pain in the head has been noticed, and for the first time since the injury a slight movement is observed in the left eyeball, only, however, when the sound eye is moved; there is also some sensation on the outer part of the upper eyelid.

October 8.—Within the past forty-eight hours the patient has had increased pain, intense on the left side of the head; a sudden œdema of the conjunctiva of the lower eyelid has produced excessive ectropion, and, on account of this, the cornea, being exposed at its lower border, presents an extensive cloudiness with a tendency to slough. The lids were accurately approximated with adhesive plaster.

October 10.—The cornea is resuming its normal appearance, and all disposition to further slough has disappeared. The patient has been confined to bed for several days past, on account of intense pain and general prostration.

October 12.—There is scarcely any discharge from the place of original injury.

October 13.—The right pupil measures one-sixteenth of an inch; the left pupil measures one-sixth of an inch.

The cornea is again quite clear; the finger passed over the abraded spot removed all the slough and left the cornea normal.*

From October 13 the patient suffered terribly with cephalalgia, and had little or no disposition to be out of his bed. His appetite became impaired, and finally stupor and coma supervened. For six days he was in a dying condition, unable to articu-

* There is at present in the Pennsylvania Hospital a young man who received a blow at the root of the nose by a bar of iron; he was quite insensible for several days; he is now (October 1) stone-blind in the left eye from the injury; the size of the pupil varies accurately with that of the sound eye; when the sound eye is closed the pupil of the blind eye is dilated; the most powerful light does not produce the least response; the iris remains widely dilated; light admitted to the sound eye produces active contraction of the iris of the blind eye.

November 15, a negro woman was admitted into the Wills Hospital with paralysis of the second, third, fourth, ophthalmic branch of the fifth and sixth cranial nerves on the right side. The eyeball is motionless and insensitive, with ptosis; the pupil dilated, the media of the eye clear, with white atrophy of the optic disk. A solution of atropia in ten minutes produced a great dilatation; and Calabar bean contracted the pupil. The cornea is completely covered by the lid, and remains normal; the secretion of tears is very slight.

late or swallow, with a pulse of 150 and a very rapid respiration. Death occurred October 22, ninety-one days after the receipt of the injury.

Post-mortem.—On removing the calvarium, there was considerable venous congestion of the dura mater and pia mater; lymph attachments glued the brain and membranes firmly along the region of fracture; the anterior portion of the middle lobe of the brain was found softened and wasted, and on pressing it aside a quantity of purulent matter escaped; on slicing off the cerebrum a large abscess was found which involved the entire extent of the left middle lobe, the fissure of Sylvius, and to a considerable extent the anterior lobe; and the left lateral ventricles were full of pus in all their horns. The abscess involved the origin of the left olfactory, which showed no adhesion to the cribriform plate, and the filaments of the nerve were absent, the optic tract, crus cerebri, origins of the third and fourth nerves; the fifth and sixth nerves were also involved as they passed along to their places of emergence; the nerves which passed through the sphenoidal fissure, foramen rotundum, oval and spinous foramina, were softened, being directly in the line of the abscess and fracture. The left optic nerve was softened from a point commencing half an inch in front of the chiasm; the choroid plexus was covered with layers of thick lymph; the tubercula quadrigemina and ventriculus tertius were normal. A probe could be introduced into the left ear an inch and a half; into the original wound a probe could be passed downwards and forwards an inch and a half, coming in contact with denuded bone. Opposite the anterior portion of the middle lobe, where the skull had been fractured, a portion of bone had been driven in, and had united at an angle which produced an encroachment upon the space designed for the middle lobe. The line of fracture commences at the meatus auditorius externus, and involves the anterior third of this bony canal and extends through the petrous portion of the temporal bone, dividing it into two nearly equal portions, sweeping away the anterior portion of the carotid canal, then extends to the body of the sphenoid bone, and involves the posterior clinoid process, along the sella turcica, breaking off one-fourth of the body of the sphenoid bone; on the left side of the sella turcica an opening one-fourth of an inch in length and one-twelfth of an inch in breadth is observed, the result of a comminution at the time of injury. The fracture extends to the lesser wing of the sphenoid and into the optic foramen, then to the sphenoidal fissure, the orbital surface of the palate bone, the great wing of the sphenoid, post-orbital edge of the malar bone, extending upwards into the squamous portion of the temporal bone, along the temporal ridge in a curved direction, upwards, downwards, and backwards, to the upper surface of the external auditory meatus. The zygoma, with a portion of the external angular portion of the malar bone, which was separated from the frontal, is absent. All that portion of bone included in the above area described as the line of fracture—namely, the base of the skull, together with the styloid process of the temporal bone and the glenoid fissure—has been en-

tirely separated from its original location, and driven downwards and inwards, and is firmly united angularly one inch below its normal position. All the nerves passing through the oval, round, sphenoid, optic, and stylo-mastoid foramina were involved in the line of fracture, were softened and firmly matted together, and surrounded by pus. The pterygoid process on the left side had been fractured at its base, and irregular union has occurred.

Remarks.—It is remarkable that with such a severe brain-injury, and involving such an extent of the base of the skull, and the destruction of so many of the cranial nerves, the patient should have lived, and presenting such fair prospects, for a time, of ultimate recovery. The results obtained from the injections of atropine are in accordance with those of experiments upon animals. The work of the physiologist has rendered it almost certain (see H. C. Wood's "Therapeutics," p. 220) that when atropia is given internally the iris is dilated, not by an action exerted upon the nervous centres, but by a direct influence upon the iris itself, to which the blood carries the alkaloid. In the present instance all the connections of the iris with the nerve-centres were involved, yet atropia, given hypodermically, dilated the pupil,—not so quickly, it is true, as it did that of the uninjured eye, but yet very decidedly. It must be remembered that the accident which severed the nerves of the eye also in great measure cut off the blood-supply of the organ, only barely enough blood finding its way into it to maintain its life. The sound eye, therefore, received a much larger dose of the poison, which was dissolved in the blood, and, of course, manifested more rapidly its influence.

REPORT OF CLINICAL CASES OF DISEASES OF THE EAR, THE CHIEF SYMPTOMS OF WHICH WERE "TINNITUS AURIUM," OR NOISES IN THE EARS.

ILLUSTRATIVE OF A PAPER PUBLISHED IN THE "PHILADELPHIA MEDICAL TIMES," JUNE 27, 1874.

BY LAURENCE TURNBULL, M.D.,

Physician to the Department of Diseases of Eye and Ear, Howard Hospital, Philadelphia.

CASE I.—Tinnitus. The sounds resembling the action of a pump and the hissing of a snake, the result of impacted cerumen and the excessive use of tobacco.

Henry L., aged 30, residence Philadelphia, occupation painter, complained of deafness, with sounds like the hissing of a snake and the action of a pump. The patient uses tobacco to excess, both smoking and chewing. He is so deaf in the right ear that a loud-ticking watch is only heard in close contact. Left ear almost normal in hearing. On examination of right ear the meatus is found covered with patches of altered cerumen, while the membrana tympani is entirely covered with a concave mass, as if melted by heat. There is not much doubt that by its pressure it first displaced and caused absorption of the air in the middle ear, driving the malleus inwards and pressing the stapes into the fenestra ovalis. Directed a warm solution of biborate of soda, in equal parts of glycerin and water, to be dropped into the meatus warm for three nights,

and on the morning of the fourth day the parts were washed out by means of the syringe. This procedure did not give entire relief until fresh warm air was blown in by Politzer's apparatus, when the concave membrane assumed its normal character, and the deafness and sound disappeared.

Case II.—Fluttering tinnitus with deafness of one side since June, 1873; the result of bathing. Treatment for two weeks with almost entire relief.

Oliver W. L., aged 14, student, Berks county, Pa., sent by Dr. E. B. Shapleigh, of Philadelphia. General health good, pulse rapid, no valvular murmur, no enlargement of heart; has constant fluttering noise in left ear; never free, night or day. Mother deaf in both ears, from cold; no other member of the family deaf. Deafness and noises commenced in June, 1873; no discharge, no pain. Left ear—hearing-distance, $\frac{6}{8}$; right, $\frac{3}{8}$. No disease of auditory canal or membrana tympani. Right Eustachian tube open and free; left contained inspissated mucus. The naso-pharyngeal mucous membrane swollen, and considerable discharge from it. Treatment prior to coming under the writer's care, washing out ear, applying counter-irritation, oils, etc., but with no benefit. Treatment first two days, inflated the middle ear; slight relief. Finding the mucus tough and somewhat dry, resorted to Lucca's plan of injecting a few drops of a solution of chloral hydrate (10 to 30 grains) to f $\frac{3}{4}$ j of tepid water into the middle ear by means of the Eustachian catheter. This was disagreeable, but not painful; after ten applications, as the results did not afford permanent relief, omitted it, and employed the nasal douche with warm solution of common salt, alternated with solution of zinc sulphas in water, to wash out any accumulation in the naso-pharyngeal space. This relieved him, but only temporarily, and was continued for four days, followed by the use of the galvanic-magnetic current, applied by the author's modification of the rheophore of Duchenne. The insulated conductor was passed near to the membrana tympani through a warm solution of chloride of sodium. This gave him considerable pain, but entire relief from the noises, with improved hearing in the left ear, so that he was able to resume his studies.

Case III.—Tinnitus the result of chronic catarrh, with depressed membrana tympani (deafness).

H. G. H., aged 40, native of Pennsylvania; merchant, doing business in Philadelphia; has suffered from constant noises in the left ear, with deafness to low sounds, for years. General health impaired, loss of appetite, and much depression. Applied to the writer December 25, 1873, being recommended by Dr. Levis of this city.

History: frequent attacks of cold in the head; employed tobacco, and had all the symptoms of follicular pharyngitis, with nasal catarrh, using a number of handkerchiefs each day, and expectorating disgusting masses of altered mucus, which was hardened, and in some instances tinged with blood. The left Eustachian tube was narrowed and diminished in its power of opening during deglutition, and the hearing in the left ear to $\frac{1}{8}$; in the right the hearing was $\frac{3}{8}$, and the tube more free. In the right membrana tympani there was sub-acute inflammation, and handle of malleus injected, with short process very prominent and membrane sunken. Left, no symptoms of inflammation, but deeply-sunken membrane.

Prior to his coming under the writer's care, this gentleman had been under the treatment of almost every quack in this city, and had spent a large sum of money without benefit. He had also been treated by a number of able medical gentlemen, regular members of the profession.

The treatment of the throat, pharynx, etc., was continued until the patient ceased to have the constant discharge. The sunken membrana tympani was elevated by means of Siegle's aural speculum, and the middle ear was medicated with various solutions, restoring it to a more healthy condition. It was still found that the sounds were moderated, but no definite change in the "tinnitus."

May 8, 1874, performed tenotomy of the tensor tympani after Weber's method, and placed the patient on the use of a mixture of spiritus terebinthinæ; this was followed by no great change in the sounds. On the 12th, injected through the opening, which had not closed, a warm solution of sulphate of zinc, gr. iij to f $\frac{3}{4}$ i of water. This was done by fitting the nozzle of the syringe to the meatus by means of an extra india-rubber packing. The syringe was very carefully and gradually employed, until the fluid passed by the nostril. This was followed by a dull, heavy pain, and the patient felt faint; relieved by the application of the air-douche, one-fourth grain of morphia by the mouth, and the inhalation of chloroform. He complained also of a crackling like the breaking of bubbles of air; still no permanent relief of the noises, which he likened to those of a boiling tea-kettle.

Faradization was then tried; for several weeks he had the fly-like noise in the ear, but when the application was withdrawn he was no better.

Having tried all the ordinary means of relief, and the throat being improved, middle ear free, membrana tympani raised, I placed the patient upon a supporting and stimulating treatment for his brain, by the use of diluted phosphoric acid, with iron, with decided benefit, while I simply kept the orifice of the Eustachian tube free from mucus by the posterior nasal syringe and solution of common salt. To correct the fulness of his head and constipation, I directed Oak Orchard salts, a mild saline aperient. This latter treatment he has been under, and he feels freer from the noises, is in better spirits, and is now able to say that he feels better than he has felt for years.

During my absence this summer, 1874, he visited my friend Dr. Cohen by my request, who tried the constant current with much the same results as those obtained by faradization, so that he fell back upon the same treatment under which I had placed him.

Case IV.—Tinnitus the result of collapse of the Eustachian tube, without deafness.

B. N. B., M.D., aged 34 years, residence Philadelphia, applied April 7, 1874, to the writer, suffering with a buzzing noise in the right ear. This was of four months' duration, and the blowing sound increasing as if into a bottle. It disturbed his sleep, and he was unable to perform his duties with comfort or satisfaction. He had consulted four physicians, and, having some sore throat, all the remedies were applied to it.

On examination, found the hearing of both sides normal, membrana tympani of the right slightly drawn inwards, but no prominence of the handle of the malleus, with no opacity of the membrana tympani. The left Eustachian tube was free, and air passed into the middle ear without any difficulty. The right was found obstructed in the pharyngeal orifice, which the writer endeavored to overcome by the use of the air-douche and Eustachian catheter, which were followed by slight improvement. A few days after, a Eustachian bougie was introduced by the aid of the rhinoscopic mirror, and an application made to the orifice of the tube, of equal parts of diluted carbolic acid and tincture of iodine. This treatment was continued, and removed every trace of the noises. The bougie was a metallic one, acutely curved, introduced by the mouth, and its use was to stimulate the mucous membrane

lining the tube, and thus remove the collapse and swelling. This bougie was introduced only into the wide portion of the tube. These bougies are employed from No. 2 to No. 5 of the French scale, and it is well to remember that the distance from the widest portion of the mouth to the isthmus or narrowest part of the tube is seventy-four millimetres, and the distance from the point to the tympanic cavity eleven millimetres, and the width of the cavity thirteen millimetres.

Another case of much the same character came under the writer's notice, but the results were not so satisfactory, owing to the length of time which elapsed before the patient applied for relief. It was as follows:

Case V.—Isabella V., aged 25, resident of Philadelphia, a lady of education, and very intelligent, applied May, 1874, stating that she was suffering with a constant buzzing sound without deafness; thought it was due to the result of a very severe cold; no pain. On examination of the offending ear, which was the right, found her hearing was $\frac{1}{8}$ left, right $\frac{1}{16}$, showing an amount of deafness by the watch which was not noticed in hearing the human voice. In the right meatus there was an excess of cerumen, the removal of which improved that ear to $\frac{3}{8}$. The right membrana tympani was found normal. Left membrana tympani sunken, and Eustachian tube of left side closed by a dark mass when it was examined by the rhinoscopic mirror. This was removed by the nasal douche, and the iodine and carbolic acid applied to the ulcer which was found under it. A strong solution of common salt alternating with a solution of sulphate of zinc was then directed to be employed at home.

May 22.—Returned and expressed her thanks for the relief afforded; she was so much improved as to be able to sleep, and was almost free from the tinnitus unless much excited. She had been under the care of an aural surgeon of this city for three months, who had employed a large Politzer's air-douche at each visit, and the application of the constant current to the ears, which, she stated, instead of improving her had only increased her distress.

(To be continued.)

NOTES OF HOSPITAL PRACTICE.

ST. MARY'S HOSPITAL.

SERVICE OF DR. J. EWING MEARS.

COMPOUND COMMINUTED FRACTURE OF THE SKULL, INVOLVING BOTH TABLES, WITH DEPRESSION.

WILLIAM McD., æt. 14, was admitted into the surgical wards of the hospital, August 19, suffering from a wound of the cranium. It was stated that he had sustained the injury at Cramp's shipyard; an iron clamp or dog weighing fourteen pounds falling a distance of thirty feet, his head being struck by the angle of the tool. He was stunned by the blow, but soon regained consciousness, and when admitted he was able to give an account of the injury. Examination revealed a lacerated wound of the scalp over the frontal bone, about one inch from the line indicating the position of the frontal suture. On separating the flaps the bone was found depressed to the extent of half an inch, and the external table was very much comminuted. Nausea and vomiting were present, the pupils were largely dilated, the pulse slow and full, and respiration was somewhat labored.

Although the symptoms of compression were not strongly marked, Dr. Mears deemed it advisable, in view of the character of the wound, to remove the fragments of bone, and thus avoid the possible dangers of

subsequent compression or the occurrence of intracranial suppuration.

Owing to the size of the wound of the bone, it was impossible to apply the trephine. After enlarging the wound of the scalp by incisions, the elevator was applied, and the comminuted portions of the outer table, some eighteen in number, were detached. After removing these it was found that the inner table had been pushed off, as it were, *en masse*, leaving a loose fragment much larger in diameter than the opening in the outer table. This fragment, after numerous attempts, was sufficiently dislodged (being pushed aside) to admit of its division by the bone-pliers. The portions were then readily extracted, and the dura mater brought into view; with the exception of a wound of one of the small arteries of this membrane, the hemorrhage from which was easily checked, it was uninjured. The wound was well cleansed by gently injecting cold water, and the incisions in the scalp were closed by wire sutures. The wound was strapped with isinglass-plaster, and covered by compresses wet with ice-water. The head was kept elevated; as soon as the patient recovered from the effects of the anæsthetics, a drop of croton oil was administered. This failing to produce any effect, eight grains of calomel were given, which soon opened the bowels freely. Instructions were given to keep him perfectly quiet, and to continue cold applications to the head; one grain of calomel three times daily was administered. Sloughing of the portion of lacerated scalp occurred, and the dead tissue was removed by the scissors. Healthy suppuration soon took place, and the wound was rapidly filled by granulations.

September 17.—The wound is closed, with the exception of a slight surface about the size of the nail of the little finger. A large depression is left on the surface. The recovery of the patient has been uninterrupted.

Remarks.—At first view this wound appeared to partake largely of the character of an *impacted* fracture, and, as such, it was a question not readily decided as to the propriety of operative interference. The symptoms of compression also, as has been stated, were not strongly marked.

The depressed character of the wound produced apprehensions as to the subsequent effects, and seemed to justify the removal of the fragments. The fact that the inner table was found to be detached to so large an extent, and that there existed a wound of one of the vessels of the dura mater which poured out a quantity of blood, fully confirmed the propriety of removing the bone. The measurements of the fragment from the inner table were found to be in the long diameter two inches, in the short diameter $1\frac{1}{2}$ inches; of the external plate in the long diameter $1\frac{1}{4}$ inches, in the short diameter $1\frac{1}{4}$ inches.

The fracture involved the frontal bone, situated about one inch from the line indicating the position of the obliterated frontal suture, and was limited behind by the coronal suture.

EXTENSIVE WOUND OF THE SKULL, PRODUCED BY A CIRCULAR SAW.

A. B., æt. 18, was admitted August 21, with an extensive wound of the skull, which was produced in the following way. The patient was engaged in collecting saw-dust in a basket, and for this purpose had crawled under a bench connected with which was a circular saw. The attendant, unaware of the presence of the man beneath the bench, suddenly set the saw in motion, which struck his head; the saw entered first at the junction of the middle and outer third of the right supra-orbital ridge, cutting obliquely across the vertex through the coronal suture, the right parietal bone, the sagittal suture, and terminating in the left parietal bone, about one inch from the sagittal suture. The length of

the wound made by the saw was seven and three-quarter inches, the width one-third of an inch; the depth of the wound through bone and in the brain-substance was four inches, according to the most accurate measurements which could be made in the absence of a post-mortem examination, which was not permitted. The edges of the wound in the bone were rough and uneven, and the brain-substance appeared to be somewhat lacerated by the large teeth of the saw. At the time of admission—three-quarters of an hour after the receipt of the injury—the patient was conscious, and struggled violently with those who had him in charge. Profuse hemorrhage had occurred, and continued after his admission. He complained of severe pain in his head, on the side of the wound, and desired to lie on that side. There was no paralysis and no convulsive movements. He died about an hour after admission, from exhaustion. As above stated, no post-mortem examination was permitted, by which alone could have been determined the exact extent of injury to the brain. The absence of any marked symptoms indicating lesion of the nerve-centres would imply that the saw passed only through the cortical substance of the brain. Neither the special senses, common sensation, nor motion were impaired. The patient appeared acutely sensible of the severe pain caused by the wound. The active movements made by the patient were in decided contrast to the symptoms usually manifested in cases of traumatic lesions of the brain, and attracted attention.

TRANSLATIONS.

A PECULIAR AFFECTION OF THE FINGERS (Dr. Arthur Menzel: *Centralblatt für Chirurgie*, No. 22, 1874).—A peculiar, incomplete stiffness of the fingers was described by Notha and Nélaton, in which the fingers, in other respects normal, resisted for some time all attempts to flex or extend them, and then suddenly yielded, their motion being attended by pain and a snapping sound like that caused by closing the blade of a pocket-knife. Nélaton thought that this affection was caused by the existence of a hard, round, movable body, of the size of a lentil, in the flexor tendons. When an attempt was made to flex the finger, the rolling body met with a resistance from the fibrous bands which strengthen the sheaths of the tendons; but if the effort was continued, and force enough used, the body forced its way through these bands and sprang forward upon the other side of them. W. Busch (*Handbuch der Chirurgie*) has observed two cases of this affection, but was unable to discover anything abnormal either in the joints or in the sheaths of the tendons. Prof. Pitka (*Pitka-Billroth Chirur.*) has no acquaintance with cases of this kind from personal observation, but thinks that the most probable explanation is that they are due to a movable cartilage in the joint. Hyrtl also has never seen a case, but thinks "that, on theoretical grounds, this curious condition can only be due to a circumscribed thickening on one or the other of the flexor tendons, with a simultaneous limited contraction of a certain portion of the sheath of the tendon." Finally, Dr. Hahn has described an interesting case in which the affection was symmetrical, both ring-fingers being involved. In this case the first interphalangeal articulation of both ring-fingers cracked, while the most painful points were found to be on the flexor aspect of the fingers corresponding to the metacarpophalangeal articulations, and from the flexor tendon at this point there could be felt a rather hard, immovable projection which was especially painful.

Dr. Menzel adds to those already recorded the history of one more case, which he considers interesting in itself, and which he hopes may facilitate the explanation of the cause of this singular phenomenon.

M. F., aged 42, a woman whose occupation was embroidering, suffered during the past winter from rheumatic pains in the lower extremities. On the 16th of May of this year, while she was at her work, she suddenly had such a severe pain in the metacarpophalangeal articulation of the right thumb that she was forced to cry out. She thought that she had thrust a needle or a thorn into her flesh, but, by a careful examination, satisfied herself that this had not been the case. From this time the pain was never entirely absent, either by day or by night. After the expiration of two weeks she first noticed the cracking of the thumb upon flexion, and sometimes she was not able to bend it at all. When Dr. M. first examined the case, on the 16th of July, he found the following: As soon as the last phalanx of the right thumb was bent to an angle of one hundred and fifty degrees, a resistance was experienced, but if flexion was continued with a moderate increase of force, the last phalanx suddenly sprang, with a moderate crack, to an angle of ninety degrees with the first phalanx. The same phenomena were noticed when the finger was extended from the flexed position, and they occurred whether the motions were of an active or passive character. Both the patient and those who examined her placed the springing and cracking in the interphalangeal articulation, but the most careful examination failed to discover anything abnormal in this joint. On the other hand, a point was found upon the flexor tendon corresponding to the metacarpophalangeal articulation which was extremely painful upon pressure, and upon the ulnar side of this same point was a hard, immovable body of the size of a lentil, which seemed to be the source whence all the pain started. On the corresponding part of the thumb of the other hand there was a projection similar in all respects to the one upon the right side except in the entire absence of pain.

This case is worthy of special observation, since the affection was apparently situated in the interphalangeal articulation, while the excessive pain on the volar aspect of the metacarpophalangeal joint rendered it highly probable that the cause of the singular condition was some change in the tendon and its sheath. Dr. M. and his assistant then made some experiments upon the cadaver in an endeavor to ascertain if a tumor in the tendon due to thickening would be sufficient to cause these phenomena in a finger. Since the tendinous sheaths are provided with numerous tense, fibrous bands in order to strengthen them, it might be possible that the sudden overcoming of such bands by a tumor in the tendon would occasion the springing of the finger. The tendon of the flexor profundus was exposed and raised, and a string was tied tightly around it from two to four times. These repeated turns of the thread made a projection which represented a small circumscribed tumor of the tendon. The tendon was then replaced in its sheath, and flexion was made either by force applied to the finger itself or by traction exercised on the tendon over the wrist. The motions of the finger thus prepared were not so free as those which were uninjured, but nothing approaching the condition described as existing in the patient was obtained. This first occurred when, in addition to the tumor of the tendon, the resistance of its sheath at an appropriate place was considerably increased or diminished. In order to increase this resistance, an artificial constriction of the sheath was effected by a ligature firmly applied. The movement of the finger was now perfect until the tumor of the tendon reached the constricted portion of the sheath, when there was a cessation of

motion. If now the force was somewhat increased, the finger suddenly sprang into the wished-for position, and this movement was attended by a snap. The sensation which was transmitted to the operator gave the idea that the lesion was within the joint; indeed, the whole process was similar in every respect to that which took place in the patient and of which an account has just been given. Instead of making the constriction directly in the sheath, an experiment was tried with the constricting band around the uninjured skin of the finger; but this was not successful, for the tumor on the tendon passed through without causing the sudden spring of the phalanx which is so characteristic of the affection under discussion. If a small piece of the sheath of the tendon was removed, so that its power of resistance was diminished, the same phenomena were caused as when a constricting band was placed about the sheath. If the artificial tumor on the tendon was relatively large, more force was needed to force it through the sheath. If now the application of this force suddenly ceased, the tumor sprang to some distance, while there was an impression conveyed to the finger that the operation had taken place within the interphalangeal joint.

In order to test the truth of the theory of Nélaton in regard to the cause of this affection of the fingers, small grains of various kinds were introduced into the sheath and, by means of a fine probe, thrust forward some distance. These bodies most commonly arranged themselves on either side of the tendon, took but little if any part in its motions, and never gave rise to the condition of affairs which is under consideration. Dr. M. thinks that he can justly draw the following conclusions:

1. It is possible that the springing of the finger may be always due to an affection of the tendinous sheath; the observer, however, receives the phenomena as attributable to some condition of the joint.

2. Neither a tumor in the sinew nor a constriction of the sheath of the tendon of itself suffices for the production of the condition; both these conjoined are required.

3. The springing occurs also when, in addition to a tumor of the sinew, there is a tear of the sheath at a corresponding point.

4. Free bodies in the tendon will not produce this effect even when there is also constriction of the sheath; the tumor must be a part of the tendon itself. It is probable that the enlargement in the tendon and the constriction of its sheath are both the products of inflammation. In regard to the case detailed above, it can be stated that the peculiar condition disappeared in a few days by the use of tincture of iodine and warm baths; but motion remains painful, and the thumb cannot yet be used. It seemed to be of importance to ascertain the nature of the disease, and if it can be shown to be due to inflammatory deposits from a circumscribed chronic tendovaginitis, it will be no matter for wonder that the course of the affection is very tedious. The hard, oval, painful body at the side of the tendon opposite the metacarpo-phalangeal articulation corresponds to the free edge of the bony groove in the first phalanx of the thumb, in which lies the flexor tendon. Both of these edges, as a rule, are rather more projecting at this point. Between these bony edges a dense oblique projection is formed by the attachment of the capsular ligament of the metacarpo-phalangeal joint. It may be that this position, on account of the depth of the groove and the oblique projection of the attachment of the ligament, is especially predisposed to be the seat of contraction of the sheaths of the flexor tendons.

W. A.

THE DIURETIC ACTION OF DIGITALIS (Brunton and Power: *Centralblatt für die Med. Wissenschaften*, 1874,

No. 32).—Max. Hermann and Ludwig have shown that the rapidity with which the urine is secreted depends upon the difference between the pressure of the blood in the renal glomerules and that of the urine in the uriniferous tubules. At present it is supposed that the diuretic action of digitalis is not due to any specific property which it possesses, but to the power which it has of increasing the blood-pressure in the arterial system. The results of experiments which these observers made about a year ago show that this is not the case. After the injection of a considerable dose of digitalin into the veins of a dog into whose bladder a catheter had been introduced, the secretion was either suppressed or at least considerably diminished, while the blood-pressure was simultaneously increased. Some time later, the pressure fell, and in some of the experiments the secretion of urine reappeared with the sinking of the blood-pressure, while in others no reappearance of the secretion took place until the pressure had become less than normal. In some cases the urine flowed more rapidly than in others, although the pressure was much below the normal standard. If the diuretic effect of digitalis is due entirely to the power which it has of increasing the blood-pressure, the flow of urine ought to be much increased immediately after the injection, and should also be diminished as the pressure falls. Instead of this, it was found that the secretion was least when the pressure was highest and became more plentiful when the blood-pressure had become less than normal. In explanation of these conditions it seems reasonable to suppose that digitalis has an irritative action upon the vaso-motor nervous system, and that its action in that respect is especially well marked upon the vaso-motor nerves of the kidney. It must at the same time be supposed that it gives rise to a moderate contraction of the vessels of the general circulation, and an increase of the blood-pressure in them, while in the kidneys it causes a higher degree of contraction of the arteries, in consequence of which there is an immediate cessation of the flow of the urine. As the irritant action on the vaso-motor nerves becomes less, and finally passes away, the renal vessels become flaccid more quickly and more completely than the others, so that the blood-pressure in the renal glomerules is still above its normal amount, although the tension of the vessels of the general circulation is below its average quantity. This supposition is further supported by the fact that the urine which is collected after the reappearance of the secretion contains albumen. This substance was found by Hermann after the circulation in the renal arteries was obstructed. The possibility that the variations of the secretion are partially dependent upon the direct influence of the medicine on the secreting elements of the kidney must not be overlooked, and these same experimenters are now investigating this point, and will in due time publish the results of their work.

W. A.

EXPERIMENTS ON WHITE MICE WITH CHOLERA DEJECTIONS.—H. Ranke (*Bayerisch. Aertz. Intelligenz-Blatt*, 1874, No. 15) has repeated the experiments upon white mice with cholera dejections which were made by Thiersch twenty years ago. The earlier experiments were made by giving the animals infected paper, but in those of Ranke the dejections of cholera were mixed with milk which was then given to the mice. In two series of experiments he attained negative results. In accordance with the advice of V. Pettenkofer, he repeated the experiments in the dead-house of a hospital which contained cholera-patients, but here too the animals remained free from infection. When the mice were fed with uninfected filtering-paper, smeared with fat, they died without any apparent cause, and in their intestines were found gray, pulpy masses.

W. A.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

DR. HAMMOND'S DEFENCE.

DR. HAMMOND has published, in the *New York Medical Journal* for September, a very elaborate defence of his action in regard to the McCormick case. The line of defence is that there are certain subjects connected with medicine in which the public are especially interested, and upon which they desire information; and, further, that men of excellent standing in the New York and even in the Philadelphia profession have frequently gratified this desire of the laity for knowledge.

All of this is true, and certainly Dr. Hammond clears himself of any imputation of being a pioneer in this business. But we think it will hardly be judged otherwise than that he has gone farther than his predecessors, and has approached more closely the "dead-line" that separates quackery from regular medicine. Offence may be given by the manner as well as the matter of the doing, and it is difficult to conceive of anything more sensational than was the flurry about hydrophobia.

A revolution in professional ethics, as we have stated before this, seems to us imminent, simply from the fact that there is an inevitable tendency for each individual to step a little in front of his fellows and so to widen steadily the distance between the old and the present customs.

The splendid pecuniary success which Dr. Hammond claims to have attained, and of which he shows many tangible proofs, undoubtedly tempts men to follow his methods, and exerts an enormous

influence,—an influence which must be considered in at least some respects baneful by all those who revere the traditions of the fathers. We ourselves are tempted to believe that it would be fairer to the more scrupulous of the profession to abolish the Code of Ethics entirely than to let things drift as at present, and thus allow the use of well-tried business methods for success to those who are reckless of any professional public opinion which has not a dollars-and-cents value. As showing how the current is setting, we may mention the insertion, a few weeks since, by a "quiz organization" of a prominent medical college, of an advertisement in one of the evening penny papers. It was at a time when scarcely a student was in town, and the advertisement was in a paper that very few students in the city, certainly none out of it, see, and therefore could not possibly have availed in obtaining any students for the coming winter session. But then the names of the quizzers were in displayed type, each with his specialty set forth, and were scattered over the city among the very classes of the laity to be reached by such means. The kernel of the nut is not, we think, hard to discover. Even the defence of Dr. Hammond may serve as a sign-post of the times, if indeed it could with truth be granted that he has only done as do his professional brethren. How different in tone from Dr. Hammond's defence—which says in substance, "I allowed it; I furnished the wood-cuts to the newspapers; but the rest of you do the same thing"—is the recent indignant disavowal by Prof. Paget of any collusion with the publication of one of his lectures in the *Pictorial World*!—a disavowal in which he declares that he did all he could to prevent the publication, and adds, "I venture to hope that I am not thought likely to be guilty of encouraging the appearance of my name in newspapers."

Is further comment needed? Will libel suits and indulging in the school-boy wit of calling editors names render the difference between these two courses less apparent?

As most of our readers probably know, Dr. Hammond has sued the *New York Medical Record* for a libel, said to be contained in its editorial on the McCormick case. Of all the various public acts of Dr. Hammond during his eventful career of surgeon-general, physiologist, novelist, journalist, medical expert, professor, and practitioner, we know of none, not even the famous anti-calomel or tartar-emetic order, which is more novel, or to our thinking more uncalled for and injudicious. If professional men are not to be criticised as well as lauded for their public acts, praise when given is of no value, and medical editors had better abandon their vocation.

The editorial complained of was, under the circumstances, not very severe. The facts set forth, with one exception, seem to be established by the evidence contained in the last issue of the *Record*; and, finally, the editor of that journal offered the use of its columns to Dr. Hammond, and has done everything he could, consistently with proper self-respect, to deal fairly with the subject. What Dr. Hammond has to gain by an appeal to court it is very hard to perceive. He certainly cannot believe public professional opinion will be influenced by the decision of the jury; and, if there be any justice, no money damages will ever in this case "salve the wound that honor feels." It is but a step from the sublime to the ridiculous, and certainly the verge of the height seems to be crumbling under Dr. Hammond's feet.

ACCORDING to the London *Lancet*, Sir Cordy Burrows, one of the directors of the Brighton Aquarium, entertained at luncheon Mr. George Somes, Mr. Henry Lee, F.L.S., and Lieutenant-Colonel Chichester, when the *pièce de résistance* was boiled octopus. It was pronounced to be very palatable, resembling boiled lobster and skate.

The cuttle-fish is used as food in various parts of the world, notably in China. It is too rare upon our coast to be of any economic value. Probably other sea-monsters might be of value. We have by way of experiment eaten, in small quantity, the transparent jelly of the ordinary jelly-fish as raw oysters are eaten, and found it not unpalatable.

CORRESPONDENCE.

PHILADELPHIA, September 21, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I have been for some months past making a new use of chloral hydrate,—viz., that of a preservative for hypodermic injection solutions, and so far have been satisfied with its reliability and safety.

Having experienced both the inconveniences of dissolving morphine or other alkaloid powders extemporaneously, and the vexing delays which will occur at night in waiting for the compounding of prescriptions, I feel that the annexed suggestion will assist those who wish to possess a *reliable* means at the *needed* moment, securing certainty and saving time.

My formula is—take of hydrate of chloral, two grains; diluted acetic acid, two drops; distilled water, four drachms (fluid).

In this menstruum any *alkaloid* usually employed (or any other of the *materia medica* which may be liable to decomposition) may be dissolved or suspended in the proportion customary with each practitioner.

I have experimented with the alkaloids morphia, atropia, and strychnia, also bromide of potassium, and in varying proportions. The solutions have kept free from *visible* alteration for several weeks, and their effect after this time was as certain as when recently compounded. A slight musk-like odor is developed in a few days, but the clearness of the solution is in no wise impaired.

Respectfully,
W. MACPHERSON, M.D.

RESECTION OF THE LOWER JAW, LEAVING RIM OF SUPPORT.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

THROUGH the kindness of the editor of the *Dental Cosmos* I send you cuts which exhibit a case operated on by myself some five months back, in which the cure became perfect without any necrosis of a very delicate rim left, and under a constitutional condition which renders a notice of it valuable to a class of practitioners who have occasion, like myself, to be informed of precedents in such direction.

The patient, a Miss C., 17 years of age, of exceedingly delicate organization and of *decidedly strumous* tendency, required operation on account of a cysto-sar-coid tumor, which extended from the first molar tooth of the left side to the first bicuspid of the right, and which involved the body of the jaw to a depth extending midway between the dental canal and the base of the bone. Exposing the parts, as shown by the cut, with the ex-

pectation of a necessity for the full section of the bone, it was determined (seeing that the tumor might be removed and yet a rim left) to risk a return of the disease and the probability of necrosis, together with the possibility for a second operation, rather than produce, without an assured absolute necessity, the hideous deformity consequent on the complete section.

The precedent of interest in the case lies in the fact that here is another instance in which the inferior dental vessels have been removed, and a long span of bone survives, and this under most adverse



constitutional condition. The patient is now perfectly

well, and is without greater deformity than is seen in any person who has lost the lower teeth. The chin, of course, and the articulation of the remaining teeth have their normal relations preserved, while even the lost parts are capable of being perfectly represented in an artificial denture which I shall shortly prepare for her.

J. E. GARRETSON, M.D.

ALEXANDRIA, VIRGINIA, September 22, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN an interesting letter from Dr. R. J. Levis, dated Norwich, England, giving a condensed report of the proceedings of the British Medical Association, the remarks of Dr. Marion Sims are given relative to the question of chloroform-narcosis and resuscitation therefrom. In this statement the opinions of Drs. Campbell, of Paris, Schuppert, and Holmes, of the United States, are quoted in favor of the view that this state is really due to anæmia of the brain.

As this is a question which claimed much of my thought and attention some years since, with a view of furnishing additional evidence in favor of that belief, I deem it not inappropriate here to refer to a most interesting case published by myself in 1860, bearing on this very subject, and, so far as I am aware, the only one on record which proves by actual ocular demonstration the truth of this opinion almost beyond a doubt. This was a case of extensive fracture of the cranium, in which a large portion of the os frontis, measuring at least three by one and a half inches, was driven into the anterior lobes of the brain by the kick of a powerful horse. The bone was crushed into ten or fifteen pieces, and imbedded into the substance of the brain, portions of which were forced out. It was a frightful opening in the skull. The patient, a boy, was perfectly conscious, and so rebellious that it became necessary to resort to chloroform to induce quiet during the tedious operation of removing the bones. Perfect consciousness and mental intelligence were remarkable features in the case. Indeed, the patient stated that from the moment of receiving the injury the memory was unbroken and complete of every circumstance. This case was attended by myself, then residing in the town of Yanceyville, North Carolina, and published in the October number of the *American Journal of the Medical Sciences*, 1860.

During the protracted operation, the patient was placed under the influence of chloroform three or four different times. As the anterior lobes of the brain were fully exposed to view and were terribly lacerated, every opportunity was offered to witness the conduct of the organ under the action of the anæsthetic, and again while free from it. These demonstrations were of an exceedingly interesting character, and, in my own opinion, establish absolutely the fact that cerebral anæmia is the inevitable result of the action of chloroform, and that death, apart from organic disease of the heart, is due alone to this condition of the brain.

The following quotation from the article alluded to is given for the purpose of showing the action of chloroform on the physical operations of the brain. I am not aware that any similar occasion has ever been offered wherein the phenomena of anæsthetic action on the physical changes in the brain were so completely exposed to investigation.

"Our preconceived ideas in regard to the specific action of anæsthetics would very naturally deter us from their use in this kind of case. Their effects in this instance on the brain, at least so far as the circulation is concerned, were perfectly manifest. Here a large portion of the surface of that organ was exposed to view, and any physical change in the brain produced by the agency of the anæsthetic could be easily observed. Considering the various speculations in regard to this influence, the effects in this case were highly interesting. Hemorrhage, which had been free previously, ceased almost entirely after the full anæsthetic impression had been made. It is conceived by the profession that under the impression of chloroform the actual vascularity of the brain is increased; that absolute congestion takes place. The present case afforded an ample opportunity to determine this question definitively. Whenever the anæsthetic influence began to subside, the surface of the brain presented a florid and injected appearance. The hemorrhage increased, and the force of the cerebral pulsations became much greater. At these times, so great was the heaving and bulging of the brain that we were compelled to suspend operations until they were quieted by a repetition of the anæsthetic. Then the pulsations would diminish, the cerebral surface recede within the opening of the skull as if by collapse, the organ becoming pale and shrunken with a cessation of the bleeding. In fact, we were convinced that diminished vascularity of the brain was an invariable result of the action of chloroform.

"The changes above referred to recurred sufficiently often during the progress of the operation, in connection with the anæsthetic administration, to satisfy us that there could be no mistake as to cause and effect.

"Again, these changes began invariably to appear with the earliest influence of the agent. As consciousness diminished, in a corresponding ratio there was diminution of vascularity of the brain; and as the mental powers would return, the contrary would occur."

The subject of this injury, though having sustained the loss of a considerable portion of the anterior lobes of the brain, was still living after the war; his intellect never having been impaired for a moment from the reception of the injury.

Respectfully,

BEDFORD BROWN, M.D.

SULPHATE OF ZINC IN RHUS-POISONING.—Dr. Charles H. Humphreys, of Ohio (*Am. Med. Journal*), extols a strong solution of sulphate of zinc as a curative of rhus-poisoning: a half-ounce or more to a pint of water, applied every hour, by means of a sponge.

SELECTIONS.

THE PLAGUE IN MESOPOTAMIA AND NORTHERN AFRICA.

THE reappearance of plague in Mesopotamia and Northern Africa is a fact of peculiar interest, even if regarded solely from the historical associations of the malady. The locality of reappearance in Mesopotamia is contiguous to the scene of the outbreak of 1867; the locality of reappearance in Northern Africa was the scene of the outbreak of 1858. Plague is believed to have disappeared from Egypt in 1844, and it is not known to have existed in Northern Africa from that date to 1858. In the last-named year the disease broke out in the regency of Tripoli, at Bengazi, the ancient Berenice, and spread over that portion of the district of Barca which was known among the ancients as Cyrenaica. Mesopotamia had been free from plague upwards of thirty years (no certain case had been known since 1834) when, in 1867, the disease appeared, and spread to some extent among the Arab tribes inhabiting the marshy district which lies west of the Euphrates, beneath the ruins of Babylon and the great shrine of Shiite pilgrimage, Nedjef (Meshed Ali).

The present appearance of plague in Tripoli began at Merjeh some time during the first quarter of the year. Merjeh is situated to the southeast of Bengazi, about twenty hours distant, on the plain of the same name. It is a new town, built on the site of the ancient Barca. When the place was visited by Hamilton in 1856, a fortress, begun a year before, and "several small houses in progress, destined to form the nucleus of a town," alone existed. Now the number of houses is said to be sixty-four, including certain excavations in the rocks, beneath the fortress, used as dwellings, and the general state of squalor seems to rival that of Bengazi, known among the Turks, from its persistent plague of flies, as the "fly kingdom." Thirty cases of plague, twenty-seven of which were fatal, have been verified by a medical commissioner, Dr. Laval, as occurring between the 7th and 21st of June, among a population of about three hundred. On the last-named date, Dr. Laval, unhappily, was himself struck down with the disease, and he died on the 27th.

In 1858 the plague which then prevailed in the district extended to Merjeh. The plain, or, as some term it, the valley, of Merjeh, is an extensive tract of "mingled pasture and cultivation," hemmed in by richly-wooded hills. Although from its extent designated a plain, and from its being surrounded by hills, a valley, yet, say the Beecheys, in their narrative of exploration on the north coast of Africa in 1828, this plain and valley, from its being situated "in the top of a chain of mountains of no inconsiderable elevation, must also be considered as a tract of table-land raised far above the level of the sea." The plain is a favorite resort of the Bedouin tribes in the summer months, from the numerous pools and lakes formed there by the water coming from the neighboring hills. The different travellers who have visited the plain describe it and the district which surrounds it as of great beauty; and those geographers who hold that the gardens of the Hesperides were in the Cyrenaica appear to have much to justify their belief in certain physical characters of the district.

The outbreak of 1858 occurred in the midst of famine, caused by a continuance of drought in several successive years, and the consequent diminution and ultimate destruction of crops and exhaustion of supplies. Famine is not stated to have preceded or accompanied the existing outbreak of plague in Merjeh.

The scene of the present diffusion of plague in Meso-

potamia is on the Lower Euphrates, south of Musseyib. The disease first showed itself at the close of February or the beginning of March last among the Affij Arabs, who occupy the northern portion of the great marshes on the east bank of the river. The infection quickly spread to the neighboring tribes, and, attacking both banks of the river, it extended along the stream from Devanieh upwards to Hillah. On the west bank of the stream the infection spread also to Nedjef (Meshed Ali) and Kerbella (Meshed Hussein) to the edge of the desert,—in fact, traversing the district which was the scene of the outbreak of 1867.

Since the commencement of June, plague does not appear to have extended beyond the area described, and there is reason to hope that it is now dying out within it. No clear knowledge exists of the loss of life occasioned by this diffusion, and it is hardly likely that such knowledge will be obtained. The medical commission appointed by the Ottoman government to investigate the diffusion has been able to satisfy itself of the nature of the disease, but has been foiled in its attempts to ascertain the extent of prevalence among certain tribes and in certain localities.

The recurrence of plague among the tribes inhabiting the marshes of the Lower Euphrates, as the recurrence of the malady in the district of Barca, is highly suggestive of inquiry regarding the development of the disease, if it were possible to carry out such an inquiry among the isolated and savage tribes affected. The Affij Arabs, among whom plague first appeared this year on the east bank of the Euphrates, seem to have like habits and like surroundings as the Beni-Taraf Arabs, among whom the disease first appeared on the west bank of the river in the outbreak of 1867. Both tribes live in the marshes, and for a third of the year amid the annual inundation of the Euphrates; both occupy reed huts covered with matting, and both cultivate and live largely on rice. Mr. Kennett Loftus, who visited the Affij Arabs twice, once in 1849 and again in 1854, describes their "fragile towns" as consisting entirely—

"Of reed huts, the reeds being tied in large bundles and nearly arched overhead. This primitive construction is covered externally with thick matting, impervious to rain. The riches of the Affij are indicated by rows of huge reed cylindrical baskets, containing the grain upon which they subsist. Rice is produced in great abundance along the edges of the marsh; but the whole of their fields were at the time of our visit and for a third of the year entirely under water. Communication is kept up, as on the marshes of Hindieh, by means of long, sharp, pointed terradas, constructed of teak, and measuring twelve or fourteen feet long by a yard in width." (*Chaldæa and Susiana*, p. 91.)

The same writer's description of the Hindieh marshes, on the west bank of the Euphrates (the scene of the outbreak of plague in 1867), as seen from Birs Nimrûd, deserves quotation:

"The view from the summit of the Birs Nimrûd is very extensive, and its utter desolation has been the theme of frequent observation. No one can stand there and survey the scene around without being struck with the literal fulfilment of Isaiah's prophecy,—'I will make it a possession for the bittern, and pools of water; I will sweep it with the besom of destruction, saith the Lord of Hosts.' Spreading out like a vast sea upon the north and west is a marsh, which all the labors of the ancient and modern rulers of the country have never been able to subdue. In certain seasons the waters of the Euphrates rise above their ordinary level and flood the whole surface of the lowlands of Chaldæa, confirming every word of the prophet. Bordering upon this marsh, a few spots attract the eye and relieve the long level of the horizon. Due south stands the little tomb

of the prophet Ezekiel, and at the distance of fifty miles, in the mirage of early morning, may be discerned the mosque of the sainted Ali, glistening like a speck of gold as the beams of the rising sun play upon its surface. Nearer at hand, on the northwest, are the twin domes of Kerbella, the burial-place of Ali's slaughtered sons. The edge and islands of the marsh are at times dotted with encampments of Khuzeyl Arabs, and with the telescope may be distinguished the numerous flocks of sheep and camels, while the hum of busy voices can be distinctly heard a distance of full six miles across the waters." (Page 33.)

About the same time that the outbreak of plague occurred among the Affij Arabs, and the disease appeared in Northern Africa, it was also rumored that plague had shown itself at Revanduz, in Turkish Kurdistan, and in the vicinity of Bana, in Persian Kurdistan. Both places are on the confines of the district which was the scene of the outbreak of 1870. At the close of that year, after an interval of forty years, plague broke out among the villages situated between the rivers Jagatu and Tatawa, southeast of Lake Urumiah. It appeared first in those situated in the swamps, and of which the inhabitants were employed in the cultivation of rice. During the winter the infected villages were cut off from the surrounding country by the snow, and when communication was reopened with them they were found to have been wellnigh depopulated by the disease. As the spring advanced and the roads became free, the inhabitants took to the hills and migrated into neighboring districts, carrying with them the infection, which now quickly spread over a considerable extent of the mountainous region. The inhabitants of this part of Kurdistan escaped the horrors of the famine which prevailed in Persia in 1871, but it is not so certain, as some believe, that the communities first attacked by the plague did not suffer much privation. The outbreak had been preceded by murrain among the cattle and by defective and diseased crops; and it is probable that the populations of the infected villages suffered great straits during the winter of 1870-71.

Famine during the past winter (1873-74) was widely present in Asia Minor, but neither the district of Kurdistan from which the rumor of plague now comes, nor the district which is the scene of the present outbreak on the Lower Euphrates, appears to have suffered, and no report of plague has come from the famine-stricken districts.

It might seem from the recent recurring outbreaks of plague as if the disease were about once more to become a prominent epidemic. The possibility of a reappearance of the disease in an epidemic form has not been overlooked by the different writers on the subject; the subsidence and even apparent extinction of the malady in countries where it was once endemic not being regarded as affording any surety against its recurrence, so long as the sanitary condition of the inhabitants remains unchanged. The limitation of the recent outbreaks to communities removed from ordinary observation, and among whom the first beginnings of the disease could not be traced, suggests that plague, although now more rarely observed in a diffusive form, may not so entirely have disappeared from its former seats of prevalence in the Levant as is commonly believed, and that these recent outbreaks may possibly be recrudescences rather than reappearances. Whichever be the truth, the practical lesson is the same; and Europe, while not regarding these outbreaks with indifference, ought to contemplate them without anxiety. In the present state of medical and sanitary knowledge and practice, plague among European nations should excite no greater emotion, as it does not call for other measures of precaution or treatment, than typhus. In the Turkish dominions in Asia and Africa the case is, however, different. There

racess and populations, as in the present infected districts, have to be dealt with, among whom the sanitary regulations of a civilized community are impossible. But the sanitary organization of the Turkish Empire seeks to close the different routes by which the infection of plague may travel from an infected locality, and it is now attempting to bring the various centres of Mohammedan pilgrimage in its dominions under systematic medical and sanitary supervision, so as to prevent them becoming as heretofore great foci of epidemic diffusion.

As we write, a report has reached this country of the appearance in Western Arabia of a disease resembling plague, and the Egyptian government has put in operation the most stringent measures for isolating the affected districts, and for placing under supervision and subjecting to quarantine arrivals from the Hedjaz in Egyptian ports. It has also decided, according to official report, to cut off all communication with the regency of Tripoli by land and by sea. The locality in which the disease suspected to be plague has shown itself in Western Arabia is Dogar (or Doga), a town built of brushwood and reeds, and lying at the foot of the hills, a day's journey northeast of the fort of Gofudah. Here the encampment of an Arab tribe has been attacked. If the suspicion that this disease be plague should be confirmed, it is to be feared that the disease will also be found to exist in other parts of Arabia, as a consequence of dissemination from the Lower Euphrates and from Meshed Ali and Kerbella.—*London Medical Record*, Aug. 26, 1874; from the *London Times*, Aug. 17.

GLEANINGS FROM OUR EXCHANGES.

PECULIAR EFFECT OF NITRITE OF AMYL (*The Practitioner*, September, 1874).—Dr. J. Crichton Browne, while administering nitrite of amyl to a girl who was in the *status epilepticus*, noticed that yawning was produced, and that whenever the inhalation was interrupted the yawning ceased; whenever it was resumed the yawning recommenced. One or two other similar observations, made by himself and his colleagues, induced him to make a series of experiments by administering nitrite of amyl to persons during sleep. Out of fifty-seven cases in which he had avoided waking the patient, in forty-two there were distinct movements of the mouth, consentaneous with flushing of the face. The most common movements were a depression and elevation of the lower jaw, as if in the act of chewing, and a smacking of the lips. Ether was found, as a rule, to merely deepen sleep without producing any movements whatever; ammonia always awoke the patient. It appears, therefore, that nitrite of amyl, when inhaled during a state of unconsciousness, has a specific action upon the motor centres of the mouth, and calls into action, by preference, the muscles of the lips and lower jaw. Whether it performs this action reflexly or through the agency of the vaso-motor apparatus is as yet undecided.

REST IN THE TREATMENT OF PHTHISIS (*The Practitioner*, August, 1874).—Dr. Frederick T. Roberts believes the following to be the only ways in which any mode of rest can be expected to be serviceable in the treatment of phthisis.

1. By keeping the lungs at rest, more or less generally or locally, disease may be prevented, its spread checked, and its cure promoted where it has already developed.

2. Possibly, by diminishing the flow of blood through the lungs, active mischief may be to some extent checked.

3. By looking to the condition of the air inhaled, any irritation from this source may be prevented.

4. Local symptoms may be considerably relieved, and untoward accident, such as rupture of a vessel, averted.

5. General destruction of tissue may be prevented by making but little call on the patient's efforts; and this is a matter of considerable importance in some cases.

POISONING WITH BURNETT'S FLUID (*The British Medical Journal*, September 5, 1874).—Dr. H. M. Tuckwell reports the case of a female, æt. 21, who took about four ounces of Burnett's fluid (solution of chloride of zinc) with suicidal intent. This was followed by burning epigastric pain and tenderness, retching, and vomiting, and inflammation of the soft palate, uvula, tonsils, and pharynx. The lips, mouth, and tongue were unhurt. Life was prolonged for one hundred and sixteen days, during which time the vomiting continued; she had tetanic spasms in the right fore-arm and hand, and grew more and more emaciated until death. The bowels were moved only three times. As the termination approached, she became covered with innumerable petechiæ and vibices, giving the body a bluish mottled appearance. For fifty-seven days life was supported by injections; water only being taken by the mouth.

There were remarkable fatty changes in certain organs of the body and in the muscular tissue, co-existing with the extreme general emaciation of the body. These changes were of two kinds. In the liver, kidneys, and pancreas there was a positive infiltration or accumulation of fat, not a substitution or degeneration; for, after the fat had been removed from them in the process of mounting microscopical preparations, the natural structures were found to be perfect; the epithelial lining of the tubules of the kidney more especially was as regular and well preserved as in the illustrations given in books. In the muscles, on the other hand, there was a true fatty substitution or degeneration.

A HANDY METHOD OF EXAMINING MORBID TISSUES MICROSCOPICALLY (*The British Medical Journal*, September 5, 1874).—Take a portion of nerve-tissue, about the size of a large pin's head, from a thoroughly defined locality, press it out gently under a covering-glass on a slide, remove the covering-glass, and apply to the mass left on the slide a drop of "Judson's simple (aniline) magenta dye," diluted with eight drops of water; with a needle, mix the dye and the nerve-matter carefully, and cover the preparation with a clean covering-glass, again gently pressing it out to such an extent that light can pass through it. On submitting a specimen thus prepared to the microscope, it will be found that the cells, the nuclei of the neuroglia, and the blood-vessels, are beautifully tinted a deep crimson color, leaving the other tissues almost unaffected. Morbid products are also well brought into view, either by their ready absorption of the dye, as in the case of amyloid bodies, or by their refusal to take on the tint, as in the case of colloid bodies. Hæmatoidin accepts the color all too readily, but the practised eye soon recognizes its appearance. Pigmentary degeneration of cells is well shown, nucleus and nucleolus being thoroughly demonstrated; the poles can also be traced for long distances.

PERCHLORIDE OF IRON IN POST-PARTUM HEMORRHAGE (*The British Medical Journal*, September 5, 1874).—Mr. W. P. Swain records two cases of post-partum hemorrhage, in the first of which all the usual resources, except galvanism, had been tried in vain, and in the second so rapid and large was the loss of blood that nothing short of immediate arrest could have saved the patient. The injection of perchloride of iron was entirely successful in both instances.

INFLAMMATION OF THE WRIST-JOINT (*Medical Record*, September 1, 1874).—In a case of fracture of the forearm, with phlegmonous erysipelas and inflammation of the wrist-joint, it was deemed possible to save the limb if the joint could be placed perfectly at rest and at the same time all pressure could be removed from the articular surfaces. To fulfil these indications, Dr. Sayre used an apparatus which he describes as follows. Take a piece of sole-leather, long enough to reach from the digital extremity of the palm of the hand to near the flexure of the elbow, and wide enough to half or two-thirds surround the arm. Dip it in cold water, and make it thoroughly flexible. Cover it with a piece of adhesive plaster, plaster-side out, long enough to go completely around it lengthwise, and lock. Now, having covered each opening with a piece of oakum, apply the leather-lined plaster to the palm of the hand, mould it, and secure it with a roller bandage as far as the wrist. Having arrived at that point, grasp the hand already covered, while an assistant grasps the arm near the elbow; then, making extension and counter-extension until the patient tells you that all pain is relieved, bring the remainder of the leather-lined plaster against the fore-arm, and secure it with a continuation of the bandage. In this way all pressure is removed from the articular surfaces, pain is relieved, and an apparatus is afforded which retains everything at perfect rest.

AXILLARY ANEURISM—LIGATION OF SUBCLAVIAN ARTERY—RECOVERY (*Canada Medical and Surgical Journal*, August, 1874).—Dr. George Ross reports the case of a young man who suffered from a right axillary aneurism of two months' duration at the time when he came under observation. His right arm hung cold and livid by his side, all motion in it being limited to slight action of the biceps and deltoid muscles. The second and third phalanges were rigidly flexed upon those of the first row; there was not the faintest pulsation in either the radial, the ulnar, or the brachial artery. In the axilla there was a tumor the size of a large lemon, which fluctuated, pulsated forcibly, gave a very perceptible thrill to the hand, and by auscultation a whizzing bruit. The pulsation was entirely controlled by pressure on the subclavian over the first rib. Digital impression was faithfully tried for forty-eight hours, but was unsuccessful and was abandoned. It was then decided to ligate the subclavian in its third portion; and this was done. The ligation was of carbolic catgut, the end being allowed to hang out of the wound. He subsequently had diarrhœa and some troublesome febrile symptoms, but at the end of four weeks the wound had entirely closed in its deeper part, and the mass of the aneurism had shrunk to about one-fourth its original bulk. About this time he had a severe cough, and expectorated a large quantity of thick, dark pus, but afterwards made a very good recovery.

MONOBROMIDE OF CAMPHOR (*The Practitioner*, August, 1874).—Dr. Bonneville believes that from about forty experiments, which lead him to attribute powerful sedative properties to monobromide of camphor, he is justified in drawing the following deductions:

1. Monobromide of camphor diminishes the number of beatings of the heart, and determines contraction of the blood-vessels of the iris and eyelids.
2. It diminishes the number of inspirations.
3. It lowers temperature in a regular and constant manner. In fatal cases the lowering increases till the end. In those which recover, the lowering is followed by an elevation of temperature, which returns to its initial figure, but in a longer time than that during which the lowering was effected.
4. Monobromide of camphor possesses undeniable

hypnotic properties.' It seems to act principally on the cerebral nervous system.

5. It does not seem that the medicament is got accustomed to, and its protracted use determines rather rapid loss of flesh in cats and guinea-pigs. He has used it with advantage in delirium tremens, insomnia, infantile convulsions, paralysis agitans, chorea, hyster-epilepsy, etc.

COMPARISON BETWEEN THE ACTION OF BROMAL HYDRATE AND THAT OF CHLORAL HYDRATE (*Edinburgh Medical Journal*, July, 1874).—1. Bromal hydrate is a more active substance, physiologically, than chloral hydrate. Four or five grains will cause death in a rabbit which would require about twenty grains of chloral.

2. Chloral hydrate produces, in small doses, or soon after a large dose, marked hyperæsthesia, followed by anæsthesia. Bromal hydrate never produces hyperæsthesia, and anæsthesia only when the animal is in such a state of coma that there is no hope of its recovery.

3. Chloral hydrate does not usually produce great contraction of the pupil. Bromal hydrate always does.

4. Chloral hydrate acts chiefly on the cerebral hemispheres, and never causes convulsions. Bromal hydrate acts less vigorously on the hemispheres, and more on the ganglia at the base of the brain and on the spinal cord,—the animal frequently dying in a state of opisthotonos.

5. After death from chloral hydrate, fluid is rarely found in the short sacs of the body. In the case of bromal, fluid is almost invariably found.

6. Chloral hydrate does not usually stimulate the salivary glands to the same extent as bromal hydrate does, but in this instance there are exceptional cases in which chloral causes excessive secretion of saliva in animals.

AMENORRHŒA (*The Medical Record*, September 1, 1874).—Prof. Alexander Skene considers anæmia as the most common cause of amenorrhœa. After having successfully treated this condition by the ordinary remedies,—iron, quinia, alcohol, etc.,—there are still some cases where the amenorrhœa persists after all the constitutional troubles have disappeared. It then becomes necessary to use means with a view to excite directly the uterus to action. Most so-called emmenagogues act by producing irritation and congestion of the pelvic organs, and are always uncertain, and often injurious. In their place for several years Prof. Skene has given chloride of ammonium in five-grain doses every three or four hours, and has obtained good results. He believes that it acts by favoring the rapid exfoliation of the epithelial lining of the uterine mucous membrane. Perseverance is an important element in the management of such cases. There are few exceptions to the rule that, no matter how long-continued the amenorrhœa may be, the menses will ultimately be normally established.

PARALYSIS FROM FRIGHT (W. Jelly, in *Brit. Med. Journal*, 1874, No. 695).—The patient in this case was a Spanish woman, aged 22, who had previously been in good health, but who, immediately after a cannon had been discharged in her immediate neighborhood, found that she was unable to advance a step.

Her lower limbs were stiff, and soon the left, and, later, the right one became very weak, while her gait was waddling and unsteady. Her general health was good, the functions of defecation and urination not interfered with, and her menstruation was not interrupted.

There was no disturbance of sensation, but there was moderate pain in the spinal column from the eighth dorsal to the third lumbar vertebra, and the lower extremities felt cool. Numerous forms of treatment were tried, but without result. Jelly thinks that owing to the

sudden change of the pressure of the air in their immediate neighborhood the meninges of the spinal column were torn.

THE HYPODERMIC USE OF QUININE (*New York Medical Journal*, September, 1874).—Dr. Stephen Rogers considers the use of quinine hypodermically a dangerous experimental medication, and rarely justifiable. He believes that the whole subject may be epitomized as follows:

1. The hypodermic method of giving quinine involves a surgical operation of considerable discomfort, not to say pain, and hence should not be employed unless under circumstances rendering it indispensable.

2. The operation is extremely liable to be followed by more or less severe and protracted local inflammation, abscess, and very possibly tetanus. It should therefore be avoided if possible.

3. It is very easy to avoid these pains, discomforts, and dangers, without in the slightest degree lessening the chances of recovery of the victim of miasmatic disease.

4. The risk connected with the hypodermic method is not at all necessary, for the available means to accomplish the results which that method claims are abundant, and in no respect less reliable or more expensive.

THE DISPERSION OF TUMORS BY PUNCTURE (*The Lancet*, August 22, 1874).—Deputy Inspector-General Cameron calls attention to the fact that in Eastern countries the natives have from time immemorial been accustomed to attempt to bring about the absorption of the enlargements of the liver and spleen, so common in hot, malarious countries, by the use of puncture with long, sharp stiletts of considerable thickness. He never in any instance saw inflammatory or other bad symptoms produced by such operations. Other enlargements may be made to disappear by the same method. Chronic glandular swellings have been greatly benefited in this way, and it is even possible that such growths as fibrous tumors of the uterus might be dispersed by it. In the case of an infant a few months old, who had a tumor about the size of a pigeon's egg, smooth, movable, painless, and situated in front of the upper edge of the quadratus lumborum muscle halfway from the spine, a firm, deep puncture produced a speedy disappearance of the growth.

FIBROUS ANCHYLOSIS (*Medical Record*, September 1, 1874).—Dr. Louis A. Sayre believes that in those cases of fibrous ankylosis which most closely assimilate bony ankylosis, a distinguishing feature is that if movements are made at the joint, and any motion whatever is secured during the manipulation necessary to a thorough examination of the case, it will be followed by more or less of pain within twenty-four hours. For when bony ankylosis is present, no movements at the joint can be made, consequently pain will not be produced at the point of ankylosis. This rule will be found to be reliable. The subsequent occurrence of pain in and about the joint, even if there be no apparent motion, will justify measures calculated to give it gradual restoration of motion.

TREATMENT OF HÆMORRHOIDS.—Dr. William Colles (*Dublin Jour. Med. Sci.*, June, 1874), having under his care a severe case of "bleeding piles" where all former treatment, including applications of fuming nitric acid, had been of no avail, concluded to try injections of perchloride of iron. For this purpose twenty minims of the ordinary tincture were injected into each mass by means of a hypodermic syringe. The injection caused less pain than the nitric acid, and one administration sufficed to remove the hæmorrhoids completely.

EXCISION OF THE SHOULDER-JOINT (*The British Medical Journal*, September 5, 1874).—Sir John Rose Cormack reports the case of a man from whom he removed the head of the humerus, with three and a half inches of the shaft, which had been shattered by a rifle-ball. He entirely recovered, without any loss of sensation, and having all the motions of the arm except those of elevation and abduction, the deltoid being the only muscle much affected.

HYPODERMIC INJECTION OF ERGOTIN IN PURPURA HÆMORRHAGICA (*The British Medical Journal*, September 5, 1874).—In a case of purpura hæmorrhagica, occurring during the progress of typhoid fever, and immediately after a severe epistaxis, two injections of one grain each of the liquid extract of ergot completely arrested the hemorrhage from the nose, stomach, and bowels, and the patient, who was previously at the point of death from syncope, rallied and made a perfect recovery.

LOCAL ACTION OF IPECACUANHA (*The Practitioner*, September, 1874).—Dr. De Mussey records a case of purulent ophthalmia in a new-born infant, in which, after all other remedies had failed, he succeeded in producing a cure by the use of the following decoction:

R Ipecac root, 3ss;
Water, 3v.

Boil for ten minutes, and; when cool, strain off.

IODIDE OF POTASSIUM IN ACUTE AND CHRONIC BRONCHITIS AND ASTHMA (*The British Medical Journal*, September 5, 1874).—Mr. W. H. Spurgiss has used iodide of potassium in over one hundred cases of the above diseases, and with invariable success, now rarely giving anything else.

MISCELLANY.

BLOOD-DRINKERS.—Upon inquiry at slaughter-houses, it is found that there are nearly two hundred persons in the city of New York who are in the habit of drinking blood flowing warmly from oxen, for strengthening purposes and for the cure of certain diseases. A lady is reported to have spoken to an inquirer as follows: "Professor Velpeau, of Paris, prescribed blood for me. I was consumptive and hastening to the grave. It has prolonged my life fifteen years. I had the utmost repugnance for it at first, but now a half-pint of hot blood from a well-conditioned ox is the greatest luxury of my life. My sister's baby so far has been preserved and nourished with little else but blood. I know twenty persons who drink it in my own neighborhood to whom I have recommended it. It has extraordinary effects on some people, especially women, but should not be resorted to unless there is absolute weakness of the system." On a visit of the inquirer to a slaughter-house in Tenth Avenue, near Forty-second Street, he found a delicate-looking woman with a sickly boy holding a glass to the blood which ran from an ox with his throat cut. Both drank two or three glasses in turn, and departed with an appearance of added vigor. One of the butchers was asked whether he ever drank blood, and is stated to have replied to the following effect: "Sure an' I do, now; why not, now? Faith,

an' ye couldn't tell the difference between it an' milk. It's just as swate, shure, and in the winter it's warm and foine. Bedad but it's stringthenin', sure. Hould on, an' I'll get ye a drap. It's best warrum—runnin' right from the baste." The proprietor said, "All last winter we had men, women, and children every morning to drink blood. They always imbibe beast's blood; never the blood of sheep. Some of them wince a bit at first, but, when you close your eyes, blood warm from the beast's neck has just the same taste as warm milk from the cow. We don't charge for the blood, excepting when we sell it to sugar-refiners." The blood of beeves is asserted to be more efficacious for weak lungs than cod-liver oil.—*The Laboratory*.

THE statistics of the New York Board of Pharmacy indicate the wide area from which the American drug trade is recruited. During the year ending June last they registered 62 proprietors and 101 assistants. Of the proprietors there were—natives of the United States, 24; Germany, 19; England, 4; Ireland, 9; Canada, 3; and Austria, Russia, and Cuba, 1 each. Of the assistants, 37 were born in the United States, 32 in Germany, 8 in England, 5 in Ireland, 3 in Canada, 4 in France, 3 in Russia and Poland, 2 each in Scotland, Austria, and Sweden, and 1 each in Norway, Cuba, and Costa Rica.

DR. FRANCIS E. ANSTIE, so widely and favorably known to the profession throughout the world for his masterly treatise on neuralgia and his other numerous contributions to medical science, died on Saturday, September 12, after an illness of only three days. His attack is said to have been produced by exposure to sewer-emanation while examining the sanitary defects of a school at Wandsworth. In him the British profession loses one of its brightest ornaments.

"NOTHING NEW UNDER THE SUN."—Doctor Mordtmann, of Constantinople, publishes in the *Gazette Médicale de l'Orient* some curious details he has discovered in some old Oriental chronicles, tending to show that the Siamese Twins, as well as the Sisters Milly and Christine, had prototypes in former times. According to these Byzantine chronicles, there came from Armenia to Constantinople, in the year 744, a monster, consisting of two children born of one mother. These children were attached to each other at the epigastrium, so that they faced each other, the other parts of their bodies being regularly formed. During their sojourn in the Byzantine capital numbers flocked to see this monstrosity; but, as the twins were superstitiously regarded by the ecclesiastical authorities as being of bad augury, they were expelled the city, to return again when a comparatively enlightened emperor ascended the throne of the Cæsars. One of these twins died, and the most skilful physicians endeavored to divide the survivor from the corpse at the point of juncture, in the hope of saving his life. The operation, however, only served to prolong its duration for three days.—*London Medical Record*.

THE INSTINCT OF BIRDS.—The foresight of birds of a coming epidemic of cholera has been occupying the attention of the *Jardin Zoologique*. That journal states that, a few days previous to the terrible ravages of cholera in Galicia in 1872, all the sparrows suddenly quitted the town of Przemyśl, and not a single bird returned until the end of November, when the disease had entirely disappeared. The same circumstance was remarked in Munich and in Nuremberg. During the attacks of cholera at St. Petersburg and Riga in 1848, in Western Prussia in 1849, and in Hanover in 1850, every swallow and sparrow forsook the town, and remained absent until the eradication of the scourge.—*British Medical Journal*.

THE FAMILY BONAPARTE.—Madame Letitia Rattazzi, one of the members of the family Bonaparte, has for some months been visiting the principal towns of Europe, to study the ways and means of establishing a hospital which shall be especially devoted to the treatment of cancer. As is well known, several of the members of this family have succumbed to this terrible disease. The first deposit will be 150,000 francs, to which will be added a biennial prize of 5000 francs for the best work on the subject, as well as a sum of 20,000 francs for him who shall describe the true cure for cancer.—*London Medical Record*.

A "PHARMACIEN" of Paris has been condemned to pay a fine of five hundred francs for selling pastilles of calomel without a physician's prescription.

DR. SOUBEIRAN, assistant professor at the Paris School of Pharmacy, has lately been appointed to the professorship of pharmacy in the Montpellier school.

NOTES AND QUERIES.

MEDICAL EDUCATION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—For the past ten years I have associated with all classes of physicians, not only in the United States, but also in different European countries; and, after a careful investigation, I find nothing so pernicious in the advance of medical science as the admittance into its ranks of gentlemen whose preliminary education has been neglected, and who are unqualified to discharge the duties which they have assumed. Most of the European colleges require that the students spend twelve years in their preliminary medical education, and, after they have passed their collegiate examination, they are required to pass the State "Faculty Board" before they are allowed to practise; and then it is certified whether they are physicians, surgeons, or both. I knew quite an eminent physician, from London, who was required to appear before the "State Board" in South America previous to practising, and failed to pass his first examination, and also his second, six months afterwards, and had to return to London, although he was a regular graduate of medicine. Had he come to the United States, the question would never have been asked if he was a graduate or not. It is a well-known fact that in no place in the civilized world are medical diplomas given out so promiscuously and uncere- moniously as in the United States.

Only three medical colleges in the United States are recognized by the South American State Faculty, and even the graduates of those colleges are required to have a certificate from the State Board before they are allowed to practise; while in Europe no one is allowed to practise unless he first passes the State Board. For some time during the late European war I had as assistants two medical cadets who had served five years at the University of Berlin, and who were well qualified to be

ranked as physicians, but the laws of the country would not allow it. Myself and forty-two other American graduates who had passed the appointed board of the German Empire were assigned on probation duty for six weeks in Coblenz, under the surveillance of the State Faculty, to test our qualifications before we were assigned to special duty. So much for Germany. In our free and enlightened country the medical refuse from the four quarters of the earth are allowed to practise and hold responsible positions with all the dignity of the learned profession. In Biblical writings and in ancient history we find the priests the men of medicine, as they were the most learned; and it was not until the twelfth century that the Council of Tours sent forth the famous edict forbidding the clergy to practise the healing art. In European countries the physicians are required to be better educated than the general class of society,—equal to that of the priests; while in this country we have in the profession the most ignorant, unrefined, and uneducated. In this, as well as in all other cities in the Union, we have a large number of so-called doctors who have never attended a single lecture or received any preliminary education; but still they are recognized as physicians, and admitted into medical associations as dictators to those who are properly educated. It is impossible for any man to discharge the duties of a physician if he is not qualified for it. His every action has a tendency to bring into disrepute the profession in general. It is impossible to elevate the character of the medical profession to its proper standard until there is some legislation in the matter prohibiting colleges from granting diplomas as they now do, and preventing quacks of every variety from practising medicine. During the past six months I have endeavored to impress upon the minds of certain members of Congress the importance of passing a national law forcing a reform in the medical profession. I think every true physician and the people from one end of the land to the other should rise, pointing to the graves of the friends and relatives who have been victims of the ignorant and of quacks, and demand of Congress a national law elevating the standard of medical education and requirements. Until this is done, the physicians as a class will have neither character, standing, nor dignity as they should, nor will the people be free from impostors.

A. TRIGO SHERTZER, M.D.

BALTIMORE.

FOUR AT A BIRTH.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—On the evening of September 18, a negro woman, aged over 40, in this vicinity, gave birth to four well-developed children, three girls and one boy. One of the girls was still-born, but I am confident that pressure during a protracted labor produced its death. There were two placentas; three of the children were attached to one, while the dead one was attached alone to the other. No physician was present during her labor, an old negress being the only attendant, and her description of the accouchement was highly interesting and graphic in the extreme.

Respectfully,

JOHN W. PITTS.

BERLIN, MD., September 22, 1874.

At a special meeting of the Medical Board of Charity Hospital, held September 22, 1874, the following resolutions were adopted:

"Whereas, It has pleased the All-wise Providence to remove from our midst our friend and colleague Dr. Washington Atlee Hoffman, be it therefore

"Resolved, That the Medical Board of Charity Hospital express their heart-felt sorrow at his death.

"Resolved, That we hereby tender to the family our sympathy in their bereavement.

"Resolved, That a copy of these resolutions be presented to the medical journals for publication; and that the Medical Staff of the hospital attend the funeral in a body.

"H. LEAMAN,
"Secretary."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM SEPTEMBER 22 TO SEPTEMBER 28, 1874, INCLUSIVE.

SMITH, JOS. R., SURGEON.—When relieved by Assistant-Surgeon Koerber, to proceed to Fort Monroe, Virginia. S. O. 190, Military Division of the Atlantic, September 24, 1874.

KOEBER, E. A., ASSISTANT-SURGEON.—In addition to his duties at Detroit, Michigan, to relieve Surgeon Smith of his duties at Fort Wayne, Michigan. S. O. 190, c. s., Military Division of the Atlantic.

PHILADELPHIA MEDICAL TIMES.

SATURDAY, OCTOBER 10, 1874.

ORIGINAL COMMUNICATIONS.

REPORT OF CLINICAL CASES OF DISEASES OF THE EAR, THE CHIEF SYMPTOMS OF WHICH WERE "TINNITUS AURIUM," OR NOISES IN THE EARS.

ILLUSTRATIVE OF A PAPER PUBLISHED IN THE "PHILADELPHIA MEDICAL TIMES," JUNE 27, 1874.

BY LAURENCE TURNBULL, M.D.,

Physician to the Department of Diseases of Eye and Ear, Howard Hospital, Philadelphia.

(Concluded from page 5.)

WE have now and then very favorable results from the galvanic excitement in isolated cases, as may be noticed by a reference to the author's statement of cases of nervous deafness treated by Brenner's formula;* yet Brenner states that he had failed in seventeen cases of tinnitus. In a carefully prepared paper by H. Schwarze, of Halle,† he observes, "I am far from denying favorable effects of the galvanic excitement in isolated cases, but I have not been able to convince myself at any time of any real and permanent results from galvanization. . . . Moreover, we must remember that a series of (more recent) ear-troubles, also of such whose causes must be sought for in the cranial cavity, are capable of a spontaneous cure. Whoever has not frequently convinced himself of this fact, is apt to over-estimate his therapeutics. The physician who is in the habit of treating all diseases by the preference of one remedy, as, for example, electro-therapeutics, of necessity over-estimates the results of his favorite remedy."

Case VI.—Extreme deafness, with noises, from sun-stroke.

Henry C. K., aged 44, has suffered from complete deafness of eight years' duration; supposed cause, sun-stroke. He had applied cold water to his head after exposure to the intense heat of the sun; no pain; says he has ordinary noises in the ear. His deafness commenced in California. Has also granular pharyngitis, extending into Eustachian tubes, with ulceration of the mucous membrane lining the vomer. Left Eustachian tube closed. The right Eustachian tube is pervious, but much narrowed. Cicatrix on left membrana tympani. Right membrana tympani more normal in appearance. Watch not heard on either side. Tuning-fork heard only on temporal bones. The patient having tried all manner of treatment without success, the writer perforated the membrana tympani, and, with Weber's improved tenotome, divided the tendon of the tensor tympani, with the assistance of the resident physician of Howard Hospital, Dr. Parish. The operation was followed by pain and a few drops of blood.

Directed oil of turpentine, ten drops every three hours, in mucilage of gum arabic, until all the acute symptoms had disappeared; electricity was then applied by Dr. Warrington, who has furnished the following notes of the case:

July 21.—First application of electricity. Stöhrer's battery, six cells. Cathode in ear; anode in right hand. No impression.

July 22.—Eight cells. Slight sensation of sound.

August 1.—Eight cells. Continued to apply electricity six times a week, about the same force and the same effect; hearing constantly improving. The throat treated by scarification and application of tincture of iodine and glycerin, equal parts. Improvement. Internal treatment, iodide of potassium from four to eight grains three times a day, combined with tincture of columbo or ginger. Also chlorate of potash, ʒij; tincture of chloride of iron, fʒij; syrup, fʒj; glycerin, fʒj; water, fʒij.—M. Tablespoonful doses three times a day. The patient felt so much better that he desired the operation of tenotomy of tensor tympani of the other ear.

September 20.—On performing the operation, he was immediately deprived of the power to hear words in that ear. Inflammation and suppuration followed. Eustachian tube became very patulous. On speaking into the ear, words were seldom distinguished, but the sound was intense and distressing. Throat more inflamed. Injected the ear with sulphate of zinc, gr. iii; sulphate of morphia, gr. i; water, ʒi. Symptoms of improvement, and some return of hearing. In three weeks applied electricity, eight cells, slight effect.

October 10.—Throat improved; hearing in right ear good, also in left ear.

December 11.—Hearing for sounds better than at any time since the operation. Throat well; able to hear words in conversation better than ever before.

Case VII.—Concussion, with extravasation of blood into labyrinth, terminating in an acute attack with deposit in the mastoid cells, with deafness and severe tinnitus of left ear. (Reported by Dr. Parish, late resident physician of Howard Hospital.)

Edward McH., native of Wales, aged 45. He stated that, when passing up the Mississippi River during the war, on the flag-ship "Hartford," under Commodore Farragut, a cannon was fired immediately over his head, the left ear being towards the gun. So close was he that his hair was burned. He immediately became insensible, and, on arousing in about an hour, found himself very giddy, and with pain in his head, but not in the ears. Nausea and vomiting were present, and occasionally occurred during the following two or three days. Prior to this accident he could always hear well, and never had any trouble with either ear. Since the accident, the left ear has been almost completely deaf, but at no time has he had tinnitus in the left ear. At the same time hearing diminished in right ear, but was not abolished.

About September 15, 1873, right ear lost almost entire appreciation of sound, when tinnitus and buzzing supervened.

About October 1 a purulent discharge appeared in right ear.

October 27.—At present both membranes perforated; left apparently drawn in; purulent discharge from right meatus. Had both washed out, and applied argenti nitras in solution.

October 30, 1873.—Hearing improved in right ear; left ear still very deaf; perforation of right apparently healing; that of left still very large. Solution of argenti nitras passed into left ear; it is felt in the pharynx, and is tasted by the patient.

November 2, 1873.—Hearing much improved in right ear, but severe pain in it and mastoid cells and over right side of head, with swelling. Dr. Turnbull punctured mastoid cells with a bistoury down to the bone, giving severe pain at the time, and causing the man to become quite pale and faint.

November 6.—Returns entirely free from pain. Hearing much improved, and tinnitus entirely gone. Patient much pleased with result.

* Turnbull, Clinical Manual of the Diseases of the Ear, p. 389.

† Archiv für Ohrenheilkunde, March, 1874.

Case VIII.—Concussion, with symptoms of extravasation of blood into labyrinth or semicircular canals.

During the summer of 1864 Dr. Parish saw a soldier in apparent general good health, very deaf, and with constant and great tremulousness of head and upper extremities chiefly, but also to some extent of lower extremities; very giddy on attempting to walk, and gait very unsteady. He stated that a few days previously, while lying in front of the breast-works, a heavy cannon was fired in close proximity to him, and that the ball passed but a few feet from his head. He was instantly rendered unconscious, and continued so for a few hours. On returning to consciousness, found himself in condition as above. He was on his way home on furlough when Dr. Parish saw him, and he was not again heard from.

Case IX.—Congestive tinnitus, the result of working at a heated furnace with head bent to one side; all the ordinary remedies employed, with tenotomy of the tensor tympani; no improvement.

Margaret A., aged 36, an intelligent woman, living as a domestic, applied at Howard Hospital with intense tinnitus. She has had charge of a large furnace; while looking into and raking it when in full blast she was suddenly seized with headache, giddiness, and noises on the side nearest the heated part, in the winter of 1871. She consulted Dr. H., a young and intelligent physician, a resident of one of our large hospitals, who syringed her ear, giving her quinia, etc., but with no relief. She then visited the Philadelphia Eye and Ear Infirmary, and was under the judicious care of the aural surgeon of that institution for some time, but his treatment was of no benefit to her. Came to Howard Hospital in January, 1873. A careful examination was made, and the Eustachian tubes were found open in both ears. Right ear, the one in which the noises disturbed her, the membrana tympani was retracted, with axillary rotation of the handle of malleus; no catarrhal trouble in pharynx. After employing all the local remedies, as the air-douche, injection by the double catheter, and washing out Eustachian tubes, also injecting into the middle ear solution of potash and hydrate of chloral, with no benefit, she was advised to have perforation of the posterior fold. She willingly consented, and returned on April 10. The writer then perforated the posterior fold of the membrana tympani in the presence of Dr. Mathews, resident physician in Howard Hospital (1871), and passed a warm solution of bicarbonate of soda, by a closely-fitting air-tight syringe; this gave her considerable pain, and she was ordered a solution of zinci sulphas, gr. iii to the ounce of warm water, to be applied at night, also a quarter of a grain of morphia if in pain, with extract of hyoscyamus applied around the ear. The perforation kept open for one month, but with no relief to the noises.

On May 5, 1873, I performed tenotomy of the tensor tympani, and applied electricity to the pharyngeal orifice of the Eustachian tube, in the presence of Dr. Parish, with Weber's tenotomy; the patient did not complain of much pain; I directed a mixture of spiritus terebinthinæ, etc., as advised by Weber-Liel.

On the 12th of May I injected the middle ear with solution of zinci sulphas, gr. vi to 3j aquæ, which gave her pain; directed hydrate of chloral to relieve her.

She returned to the hospital on the 15th, 18th, 21st, and 29th,—no improvement. On the 29th she desired to have the operation repeated, in hopes of some benefit; this was again done. She suffered but little during the last operation; no bleeding as at the first operation. She could pass air by the perforation, but there was no improvement in the noises.

Called at the hospital, by request, in six months. December, 1873, still troubled with the noises; no impair-

ment of hearing since the operation. No pain. Membrana tympani shows two spots of opacity. Able to attend to her duties; is as well as before the operation.

Case X.—Complete deafness, with no tinnitus; not any loud sounds heard, and no articulate sounds recognized even by the use of the most powerful ear-trumpet.

A. H., aged 55, a lawyer by profession, and a gentleman of fine literary taste and philosophic knowledge, applied to the writer during the winter of 1873. The history of his case was as follows. He gradually lost his health, and with it his hearing, about one year before he applied; he still heard sounds when he placed himself under the care of a physician of this city, who, he stated, first introduced steam into his middle ear, and then blew cold air, which was followed by total deafness (doubtful). When he came to the writer he was under Prof. Agnew's care for his general health, and the writer made but a casual examination, and advised him to continue, and found both Eustachian tubes open,—one more than the other,—with dense opacity of both membrana tympani, without tinnitus, showing complete paralysis of the auditory nerve. In partial paralysis we have subjective or pseudo-subjective sensations. This patient again presented himself in the fall of 1874, and was very desirous of having something done for his hearing. His health was improved, but with the improvement no sounds were heard. We had therefore to inform him that no means that we knew of would be of any benefit to his hearing. His only brain-symptom was vertigo.

Case XI.—Deafness, but hearing by the use of the ear-trumpet; tinnitus with distressing vertigo; patient relieved by the operation of tenotomy of the tensor tympani.

The following are the notes of this case: George B., aged 45, Princeton, Indiana, applied May 16, 1874. Has been a merchant in the neighborhood of Pike's Peak; was a soldier for one year, but was discharged on account of his deafness and his liability to fall from dizziness. History: has had no children's diseases, but had intermittent fever for ten years, with enlargement of the spleen. Has never had any pain in his ears, but on one occasion accidentally struck his left ear with much force, and had a discharge of yellowish pus for one week. In the year 1859 heard as well as any one; became interested in a mill, when, owing to exposure, his hearing began to leave him. He became a soldier, but he could not hear the fife or drum; and yet he could distinguish some of the low notes of the piano but none of the upper notes; could hear the human voice in his own ear-trumpet, made by himself, of thin platinum in the form of an auricle, which was so light in weight that he balanced it in one ear. The treatment he had been under consisted in syringing the ear, and soon after it was followed by a pulsating noise in the left ear, which was at first intermittent, but after a time became constant. He had in his right ear sounds like a letting-off of steam. He had been under physicians at his home and in New York City. Examination: external meatus normal; chronic inflammation of membrana tympani of left ear, with injections along the handle of the malleus, with deposit of lymph and adhesions. This was evidently the effect of the blow. Right membrana tympani injected, with depression, with deposit of lymph on the vessels along the handle of the malleus. Rhinoscopic examination of the orifices of the Eustachian tubes: left, open and patulous, with enlarged glands; right not so much open. Tuning-fork heard best in the right ear; left not so perfect, showing conduction of the bones of the head, and not entire paralysis of the auditory nerve, as in the other case. Examination by exhausting the air by Siegle's pneumatic apparatus repeatedly applied, afforded no relief to the pulsating noises.

Pressure by shutting the nose modified them somewhat. Faradization with the sponge on wire insulated produced a sound like that of a fly on a window-pane; on increasing the power the pain became much more intense under the ear and in his teeth, but no relief to the tinnitus. By the use of the author's double otoscope, heard the sound of the air in the right Eustachian tube loudest.

May 26, decided to operate by tenotomy of the tensor tympani, and to break up the adhesions as the only chance for relief. This was performed at Howard Hospital, assisted by the resident physician, Dr. J. Barr (1874), and in the presence of two medical students. On perforating the drum, there was some difficulty in dividing the tendon of the muscle, which was unusually thick and resistant, and the patient experienced considerable pain, owing to the adhesions which had to be broken up by passing the knife under them. To prevent inflammation, the ear was carefully covered up, and a mixture of terebinthinæ spiritus and ammonii chloridi given three times a day.

Reported same day: parts looking very well and open; all pain ceased by 7 P.M. the evening of the operation. Feels relieved of a certain disagreeable sensation in his head (vertigo),—feeling of falling.

May 30.—Still continues well; injected a solution of one grain of sulphate of zinc through the opening; not much pain; this was repeated twice.

The patient left for his home in a few days after the operation, and when he arrived the writer received the following letter from him, in which he states, "I arrived at home all right; no trouble with ear. The left Eustachian tube is now more open than it ever was; hearing about the same in both ears; had no trouble with my head since the operation."

I gave him certain instructions to be carried out, also advised a more extended trial of the faradic current, as Brenner's formula had been obtained by its use in our first experiment with his deaf ear. This, it is true, is rather like a confirmation of Schwarze's second conclusion, "that Brenner's normal formula is obtained in absolute deafness;" but there must be no tinnitus, for we have no such result in cases where there is absolute paralysis of the auditory nerve (see case before referred to).

The following are the conclusions of the eleven cases reported: four were cured, two much improved, two improved, one not improved, and two not treated. One of those not improved is a form of deafness accompanied with distressing noises, where the patient apparently was in sound health a few hours before; this is followed by apoplectic symptoms, with giddiness, and is due to hemorrhage into the labyrinth, and is known as Ménière's disease. The same results shown in another from injury may occur from fracture through the bony labyrinth by contre-coup. In one we had absolute paralysis of the acoustic nerve, with little or no tinnitus.

"Nolet,* of Leyden, has made experiments concerning the origin of pulsating tubular noises which have been so much discussed, the main results of which are here given, because they are important. Vascular or pulsating noises are produced in tubes of equal calibre, if the velocity of the current be great; and this velocity must be the greater the smaller the diameter of the tubes and the smoother their walls. The rougher their walls are, the sooner

will noises be produced. If there be a strictured place in the tube, a noise becomes perceptible already at a rate of velocity when there would be no noise perceptible if the narrowing were not present. When the velocity of the current was considerable, a quivering was to be felt before and behind the strictured place, which was more readily produced in tubes with thin walls than in such as had thick walls. When the tubes were partially widened, noises were produced in them by a greater velocity of the current (? translator). The noises are produced by the viscidness (vertices of the fluid), and not by vibrations of the walls of the tubes nor by rhythmical friction (?) of the out-flowing jet."

The treatment of such pulsating noises is of two kinds: first, constitutional treatment if the disease depends upon thinness of the blood or a want of certain elements; these must be supplied, if from want of iron, by chalybeates, if from want of fibrin, by wheat, etc.; if the other important elements are wanting, blood in some form itself, as the expressed juice of beef, like Valentine's, or by lamb's blood taken warm. If the blood is too thick or viscid, it must be reduced by salines. If the noises are very distressing, resort may be had to nervines and agents that will control the violent action of the heart, as aconite, digitalis, with chloral hydrate or fluid extract of valerian, *Prunus virginiana*, or water of the bitter almond or orange-flower. Mechanical means are also to be tried, by compressing the jugular vein over the highest point of the hyoid bone. The observations of Benedict, Türck, and Politzer confirm us in the opinion that pressure over the mastoid apophyses would, in some instances, modify these subjective noises. By removal of the narrowed condition of the meatus auditorius, as performed by Larrey and Cloquet, or by some mechanical and surgical means as related in the author's work, p. xvi. In a certain class of cases of chronic catarrh of the middle ear, Politzer has recommended the closing of the external meatus by wax or cotton charged with wax. Schwartz employed for the same purpose a ball of gutta-percha oiled, softened by means of warm water, or, as the writer prefers, gas-heat and olive oil. Luca has employed and recommended the rarefaction of the air by fitting the external meatus with an instrument like Siegle's pneumatic apparatus, especially in catarrh of the cavity of the tympanum. The condensation of the air in the auditory canal by the same instrument gives, sometimes, good results in the cases of pressure of the stapes, or stirrup, over the fenestra ovalis, or oval window.

Then follows puncturing of the membrana tympani, recommended as early as 1722, and first received into favor as a legitimate operation in surgery about the year 1800, for deafness and sounds in the ear. We have repeatedly performed this operation, and in certain cases with success; again, we have operated with no relief to the noises. Schwartz, who has performed this operation over one hundred times, has established it in cases where there has been an accumulation of mucus, blood, or pus. He prefers a transverse incision in the posterior and inferior part of the membrana tympani.

* Trolisch, *Ohrenheilkunde*, Fifth (German) Edition, p. 507. Nolet of Leyden (see *Archiv für Heilkunde*, 1871, xii.).

Dr. Luca* has also resorted to this operation in the treatment of deafness and noises, by a division of the posterior fold or pocket for the purpose of reducing the tension of the membrane of the drum. Where he has had the peculiar rattling sound denoting a collection of secretion, which is also to be perceived by a sufficient transparency of the membrane, after cutting the posterior fold he extends the cut to about the middle of the membrane, in order to facilitate the escape of the not unfrequently very viscid and tenacious secretion. He has performed this operation (division of the posterior fold) up to 1870 forty-eight times in forty-five cases, as follows: First, in cases without demonstrable adhesions, fourteen operations: greatly improved, seven; a little improved, seven; not at all improved, none. Second, in expressed otitis media adhesive, twenty-seven operations: greatly improved, five; a slight improvement, eleven; not at all improved, eleven. Third, in genuine catarrh of the cavity of the drum, at the same time letting out the secretion, seven operations: of these, six were greatly improved, one a slight improvement. Politzer performs the same operation by incision of the posterior fold (not pocket) of the membrana tympani. His incision is a longitudinal one, at right angles to the long axis of the fold between the short process of the malleus and the peripheric end of the fold.† Of the operation of tenotomy we have already given our experience in the cases above reported.

A CASE OF PLACENTA PRÆVIA, WITH REMARKS.

BY W. H. PARISH, M.D.

MRS. O'D., a native of Ireland, æt. 30 years, of fair general health, had passed through two ordinary labors, and had reached the termination of the eighth month of the third pregnancy, when, to escape the attack of a drunken husband, she leaped from a window about five feet down to the pavement. A few minutes subsequently, while lying in bed, a profuse uterine hemorrhage came on, lasting until a number of cloths were saturated and until the woman became pale and weak. She, however, sent for no physician at that time, and in a few days was again at work. About two weeks afterwards another flooding came on at night, while in bed, and without assignable cause. I was sent for, and found her with all the evidences of having sustained an excessive loss of blood. This was also attested by the condition of the bedding, etc. A digital examination showed the os to be about the size of the finger, and the placenta could be distinctly felt completely closing the internal orifice. The bleeding had stopped, and there were no evidences of incipient labor. I gave some morphia, and enjoined the recumbent posture, with a cooling regimen. After watching her for a few hours I left, but returned frequently during the subsequent days. About ten days later a sudden and profuse hemorrhage came on. I reached her in a short time, and found that the bleeding had again been excessive, but had then ceased. The os was the size of the two fingers. The placenta was easily felt, and no free membrane was in reach. Slight labor-pains were present.

Having to be absent for a short time, I obtained the assistance of one of our students, Mr. Percival Loder, and instructed him on the first appearance of bleeding to introduce a tampon of soft old rags, and to saturate with a solution of equal parts of water and Monsel's solution that portion which would be against the os uteri. Hemorrhage soon returned, and Mr. Loder successfully tamponed the vagina, and, at my request, began then the administration of ergot. I returned in two hours, accompanied by Dr. C. A. Robinson, of Alabama, then on a visit to this city. We found the tampon had proved effectual. It was removed. We found the os fairly dilated, and evidently dilatable. The placenta we found to be then occupying about four-fifths only of the dilated os; the other one-fifth occupied by membranes only, and lying to the mother's right. On removal of the tampon, bleeding returned. I ruptured the membranes; the liquor amnii escaped freely, but the uterus did not respond, and the hemorrhage continued. I attempted the forceps. Dr. Robinson made faithful endeavors to steady the "movable head" by external pressure. Introducing my right hand so as with the dorsum of my fingers to press the placenta gently to the mother's left, I slipped the first blade of Wallace's forceps along the palmar surface of my hand past the placenta, and to the side of the child's head,—the position being the first one. The other blade was introduced without difficulty to the opposite side of the head, and the two were locked. My finger found, however, that the head had not been grasped. Quickly removing the second blade, I adjusted the first blade, without withdrawing it, to the side of the head, and, reapplying the other blade, locked them. My finger again showed, however, that the head had a second time escaped. It had probably moved its position, and the resiliency of the placenta had possibly pressed the first blade also from its position. I withdrew the forceps, introduced my left hand, and, seizing one leg, made version and delivered by the feet, somewhat promptly, as the cord was very feebly pulsating. The placenta became detached, and showed at the vulva as the shoulders were emerging. There had been no prolapse of the cord, and its attachment was at its usual site,—the centre of the placenta.

The uterus was followed down by external compression; clots were removed from the uterus with the hand; ice applied internally and externally, the cold douche, compression of the abdominal aorta, were all ineffectual. The hemorrhage continued. The woman's condition was becoming a critical one. With pale and pinched features, colorless lips, and a scarcely perceptible pulse, she was restless, tossed her arms about, said that there were noises in her ears, and that things were dark to her. A little more blood lost, and death would have resulted. Now, however, wrapping a piece of cloth around my finger and saturating it with Monsel's solution, I introduced it into the uterus, and swabbed the area of placental attachment. The uterus contracted, the bleeding ceased, and the woman's life was saved. The child, too, was living, though feeble, and of a livid pallor. It died at the end of four hours.

Under the use of stimulants, with a nutritious diet, and the employment of quin. sulph., gr. xii, and morph. sulph., gr. ss daily, the woman slowly improved. On the fourteenth day she ventured to steal out of bed, and had a severe rigor, followed by intense fever, with induration and pain in the left iliac region. On the twenty-first day, another rigor. The temperature ran up to 105° Fahr., but gradually fell under the quinia and morphia, with the employment of the tinct. digitalis and the tinct. ferri chlor. During the fifth week she was allowed to sit up, and from that time rapidly improved, so that on May 1 the recovery was complete. The delivery occurred on the 15th of February, 1874.

* Dublin Journ. Med. Sci., Oct. 1871, p. 322.

† Monatsschrift für Ohrenheilkunde, Jahrgang ii. p. 51.

The etiology of placenta prævia is undetermined, though it has been noticed that in multiparous women with leucorrhœa—*i.e.*, in those in whom there is increased width of uterine cavity and increased smoothness of uterine mucous surface—the complication is most frequent (Schroeder). Mrs. O'D. had been suffering with leucorrhœa, and was of course a multipara. Leishman tells us also that the trouble is apt to recur.

The leap from the window preceding the hemorrhage, and the subsequent discovery of the placenta in its abnormal position, would have served as a strong fact to have fixed in the minds of those obstetricians who lived prior to the time of Portal (1785) the belief that its unusual position was due simply to the detachment of the placenta from its ordinary site at the fundus, and its gravitation to the more dependent position over the uterine orifice.

The diagnosis is always, perhaps, sufficiently easy. It will be noticed that what was here at first complete became of its own accord, as the os dilated, partial placenta prævia.

The frequency of this trouble, according to Boivin, is 1 in 2554; Clark, 1 in 2596; Collins, 1 in 1492.*

The prognosis of this, "one of the most dangerous accidents incident to a parturient woman," depends in individual cases pre-eminently upon the treatment, whether prompt and judicious. And in the statistics of different series of cases, the proportional mortality, of the mothers at least, seems to vary somewhat widely with the plan of treatment instituted.

From rupture of the membranes, the tampon, and turning,—the preferred treatment with the mass of obstetrical authorities,—the maternal mortality has been given by Simpson at 27.48 per cent.; by Trask, 27 per cent.; by Lee, 33 per cent. So that in placenta prævia, under the ordinary treatment, about one-third of the mothers die.

Schroeder, in his late authoritative work, recommended that for the hemorrhage coming on prior to labor absolute rest in the dorsal position should be enjoined, and that if bleeding persists, the tampon must be resorted to, remembering, however, that this remedy may superinduce labor. "The treatment during labor," he says, "is very simple. 1, a tampon to the vagina until the cervix is so dilated that the foot can pass through it; 2, one foot is brought down by the combined manipulation, and gradually the foot is more strongly drawn upon." If the attempt at version does not succeed, he does not, with the view of increasing uterine contractions and causing the head to be pressed against the bleeding orifices and thus to aid in checking the hemorrhage, rupture the membranes immediately; "for," he says, "the uterus is not always thus aroused; and if the os is not dilated or sufficiently dilatate to admit of delivery, it would become necessary to resort to the tampon, and under such conditions there would be considerable risk of a concealed hemorrhage. So that version failing

when the os is the size of the two fingers, he continues with the tampon without rupturing the membranes, until the head is being pressed sufficiently firmly against the os to stop the hemorrhage, or the os is sufficiently dilated to admit the passage of the hand and the turning of the child. If the foot has been drawn through a narrow os the leg will serve as a tampon, and, as the os gradually dilates, the child should be gradually drawn through. If, however, the os admits of rapid delivery, and the child is living, but *very feeble*, he permits the resort to rapid delivery, but not to the extent of too much endangering the life of the mother. On page 312 he says, "When the os is sufficiently dilated so that the head can enter it, it may be extracted, if necessary, by means of the forceps. The *accouchement forcé*," he says, "always avoid." Schroeder does not give the results of treatment in his hands. Such, however, with slight modification, is the teaching in the main of most authorities, and the great majority of practitioners would give it as the line of their practice.

Some twenty years ago, Simpson, noticing with others that hemorrhage almost always ceased when the placenta was delivered spontaneously before the birth of the child, and that the woman almost always recovered, advocated, in cases of hemorrhage, the artificial detachment and delivery of the placenta, letting the child remain until the ordinary process of labor should deliver it. He collected accounts of one hundred and forty cases, including both those of artificial extraction and natural expulsion, in which there were only ten deaths, or a maternal mortality of 7.14 per cent., certainly presenting, though the statistics are somewhat faulty, a much diminished risk to the mother. His views, however, chiefly because of the almost certain death of the child, and because the bleeding did not stop as certainly after artificial as after spontaneous delivery of the placenta, were subsequently modified so that he advocated the treatment only in exceptional cases. Cazeaux says that only "in case of death or non-viability of the child should the placenta be extracted." Such is also the teaching of Schroeder, and perhaps of all authorities of to-day.

Simpson thought that the bleeding came from the detached portion of the placenta, and his object in separating the placenta entirely was to prevent the blood getting into it and then getting out of it. No one entertains this view now, for it has been well established that the hemorrhage comes from patulous vascular orifices in the uterus itself; and whether the placenta is separated in part or throughout its entire extent, bleeding will occur unless these orifices are closed; and this is accomplished almost solely through the contraction of the muscular tissue of the uterus. The placenta must become separated sufficiently to admit of dilatation of the os, and it is not detached beyond this until the engagement of the head. For a number of years Dr. Barnes has advocated the separation, by means of the finger, of the placenta from what he calls the "orificial zone,"—*i.e.*, from an area of the uterus equal to the area of the os when dilated to the extent necessary to permit the passage of the

* Hodge, p. 479.

child. He claims that by this means the os is allowed to dilate more rapidly, that the contractions are more complete, and that thus the uterine orifices are more effectually closed and the hemorrhage obviated. He says that unless the hand is passed into the uterus there is no danger of detaching the entire placenta; for the finger can sweep over a surface of a diameter of only six inches, whereas the surface of placental attachment has a diameter of nine or ten inches. Moreover, the diameter of an os through which a child can pass is just about six inches.

For hemorrhage coming on before labor, he considers rupture of the membranes the "most generally efficacious remedy." If bleeding continues, he introduces a tampon, preferring laminaria tents, passed into the os. He removes the tampon every hour, in order the better to watch the progress of the case, for occult hemorrhage might occur. Usually the labor will thus go on satisfactorily; but the bleeding may continue, the os may not dilate, and there may be no active labor. Now he dissects the placenta from the "orificial zone," and "often the hemorrhage ceases" and the os retracts. At the same time he encourages uterine contractions by means of the binder, of ergot, and of stimulants. If the uterus contracts, labor will go on safely. If the uterus is inactive, he introduces one of his dilators, so that between the binder and the bag the bleeding is held in check. If hemorrhage should still continue, or if the position of the child is other than that of the head, one of the feet must be brought down by the bipolar method as soon as the os permits it. It is not unusual for the position of the child to be an abnormal one.

Of sixty-nine cases thus treated in his hands, the maternal mortality was one in eleven and a half; certainly much better than one in three or four.

This treatment is recommended by Tanner and by Leishman, but is not referred to by Schroeder, nor in the older works of Cazeaux, Ramsbotham, Hodge, etc. The physiological considerations upon which it is based, with the favorable results obtained by Dr. Barnes, render the remedy well worthy of our adoption in suitable cases.

Under whatever treatment, the infant mortality is between sixty and seventy per cent. The child dies usually of asphyxia, the mother usually of loss of blood, either from its immediate or its remote effects.

We have not referred to any difference in the treatment of partial and of complete placenta prævia, and perhaps a distinct difference could not well be drawn, although from rupture of the membranes in the partial form we are most apt to obtain satisfactory results.

In the case we have reported, the want of success in the ready application of the forceps illustrates the advantages of version, unless the head is held firmly in the pelvic canal by uterine contractions.

The failure of all the ordinary methods in use for checking post-partum hemorrhage, the persistency of the hemorrhage, and the threatened death of the woman, with the speedy, gratifying effect of the ferruginous styptic, would seem to show unmistakably that the woman's life was saved by the local use

of the iron,—a remedy highly advocated, especially by Dr. Barnes; strenuously opposed, especially by Dr. Snow-Beck.

The manner in which we used it is recommended by Leishman in the post-partum hemorrhage from placenta prævia, and would be indicated whether the bleeding was due to paralysis of the cervical segment or to a tearing of the tissue of the cervix.

TREATMENT OF VENEREAL BUBOES.

BY H. E. WOODBURY, M.D.

IN the *Medical Times* of September 19 I find under this heading a translation of Sauszinski's method of treatment. A brief statement of the plan I have pursued since 1864 may prove of interest to the profession.

In that year I was connected with Armory Square General Hospital, Washington, D.C. A soldier came to me with a large bubo, and informed me that some of the medical officers had been for weeks treating it, but that it was larger, harder, and more painful than before. I directed him to apply hot flaxseed-meal poultices, changing them frequently. This he did faithfully, and on the evening of the second day I operated as follows:

A sharp-pointed bistoury was passed through the tumor longitudinally; that is to say, the knife was entered at a point of the gland nearest to the ilium, and carried entirely through it in the direction of the pubis. When the knife was withdrawn, from the two small openings issued a little blood mixed with pus. With a small rubber syringe, I then injected a drachm or two of tincture of iodine, diluted (one part to four of water). This, being forced into one of the openings, flowed out freely from the other. Rest for a few days was enjoined, and the only dressing used was lint, saturated with a weak solution of potass. permanganat., a roller being applied as a compress over the lint, and as much pressure being made by means of a bandage as the patient could comfortably bear. There was but little suppuration, and no sloughing. In a short time it was evident that adhesion of the integument to the deeper tissues had taken place, and a cure was soon effected. Iodide of potassium was given (in ten-grain doses) during the treatment. The only traces of the bubo that remained were a slight induration of the part, and two small cicatrices at the points of entrance and exit of the knife.

The unsightly scar that follows the old method of treatment,—free incision,—and the slow process of repair attendant thereon, render the method herein proposed more acceptable to the patient and more satisfactory to the surgeon. I never make free incisions in these cases.

In some cases that have occurred in my practice I have succeeded in avoiding the use of the knife, as follows:

The patient is confined to his bed; a half-brick, covered with flannel,—a single thickness,—is laid upon the bubo. A lump of ice is kept upon the brick, and as it melts the flannel is saturated with ice-water. I have seen a large bubo disappear in

twenty-four hours under this treatment by cold and pressure; a combination of iodine and iodide of potassium in syr. sarsap. being administered internally. If this course be resorted to at the proper time, we believe that the necessity for surgical interference would often be avoided. Of one fact we are fully convinced by experience,—if the knife be used, the smaller the incision, the better and more rapid the cure.

WASHINGTON, D.C., September 23, 1874.

CHOREA IN THE NEGRO.

BY CHARLES G. POLK, M.D.,

Philadelphia.

IN reply to the query of Dr. S. Weir Mitchell, I will state that in the spring of 1860 I treated a mulatto in South Milford, Delaware, suffering from chorea. The man was a ship-carpenter by trade, large, strong, and otherwise healthy, and about 30 years of age. In the pure negro I have never seen a single case, although during our civil war I had, temporarily, six colored regiments under my charge; and, in addition to my duties as post-surgeon at Gainesville, Florida, 1865, I performed the duties of Freedman's Bureau Surgeon, and had for six months a large field of observation. The rarity of the disease had attracted my attention, and I tried to find a case in Charleston, South Carolina, without success. In 1867, while post-surgeon at Greensboro', North Carolina, I did nearly all the work of the unfortunate bureau surgeon; saw much of negro practice, and did not witness a case even in one of the mixed race. I am consequently led to believe that if it ever happens in the negro, the occurrence is extremely rare.

TRANSLATIONS.

TRANSFUSION OF LAMB'S BLOOD.—Drs. Fiedler and Birch-Hirschfeld, in Dresden (*Deutsches Archiv für Klinische Medizin*) have been investigating the question of the utility of lamb's blood for transfusion, and have performed the operation in a series of six cases in the hospital, where their progress could be carefully observed and registered by experienced observers. In addition to these, of which full details are given, the operation was performed eight times in Dresden by other physicians. The conclusions drawn from these cases are far from being as favorable as those reported by Gesellius* and Hasse,† who have lately revived the much-vexed question of a century ago, concerning the adaptability of the blood of animals for transfusion.

The six cases reported were suffering from chronic (tubercular) pneumonia, in different stages of the disease. When the operation was performed, the blood was led, from a tube connected with the carotid artery of a yearling lamb (which had half an hour previously received two grammes of chloral hydrate, hypodermically), into a vein in the patient's fore-arm. Soon after the commencement of transfusion the patient generally experienced a sense of warmth and fullness in the

face, followed by severe abdominal and lumbar pains, nausea, dyspnoea, with an increasing sense of oppression, jactation, hyperæmia, with injection of the conjunctiva, passing into symptoms of collapse; the pulse, which at first was strengthened, gradually became thread-like, the extremities cold, and the face cyanotic. The transfusion was generally continued until the complaints of the patient and his general appearance forbade further interference, which was at the expiration of from eighty to two hundred and thirty-six seconds, in the cases reported, and after fifty to one hundred and fifty grammes of blood had been transfused.

In each case there was a marked elevation of the temperature, which attained its maximum (39° to 41.2° C.) in from one and a half to five hours after the operation, and was not proportional with the amount of blood transfused. In from sixteen to twenty-four hours the temperature fell to the usual range it occupied before the operation, before resuming which, however, in some of the cases, there was a more or less rapid temperature-collapse, the thermometer showing a difference between the maximum and minimum temperature of from 3° to 5.8° C.

In all of the cases the operation was shortly followed by a severe chill and a profuse sweating. Icterus appeared, in one case, the day succeeding the transfusion, which was attributed to staining by hæmatin liberated by solution of the old or new blood-corpuscles. In one case there was an eruption of herpes labialis on the second day, and in three urticaria appeared on the fifth to the seventh day, lasting from forty-four to forty-eight hours. This was thought to be due to an irritation of the vaso-motor nerves; to which was also attributed the paralysis of the small vessels shown by the hyperæmia at the time of the operation. The pains were attributed to irritation of the cord or its membranes by the animal arterial blood, and were thought to be produced in a similar manner to those which accompany small-pox.

The operation was performed in each case at the desire of the patients, who, inspired by the thought that they had new blood in their veins, reported themselves much better the day after the operation; but the improvement was imaginary, and they soon were convinced that they had gained nothing. *The disease in the lung, as proved by physical examination, progressed steadily without interruption.* The appetite, weight, etc., were unimproved by the transfusion. In three cases it was succeeded by temporary hæmaturia, in one of which subsequent post-mortem section showed fatty degeneration of the kidney, of which there had been no symptoms prior to the transfusion. In a case of post-partum hemorrhage where it was resorted to, the patient showed at the autopsy a capillary hemorrhage into both pleural cavities, which was evidently caused by the transfusion, as there was no evidence of previous pleuritis. Two cases are on record where death occurred during the operation.

A case is reported where the transfusion of lamb's blood was resorted to in a case of anæmia produced by obstinate hæmatemesis. The usual physical disturbances occurred during the operation, from which, apparently, no relief was obtained, but the case appeared to be steadily progressing towards a fatal termination; when an unexpected change took place, and the patient (a girl of 22 years) rapidly and steadily recovered. This result cannot be credited to the transfusion, only in so far as it may have put off a fatal result until the change occurred, which was as unaccountable as it was unlooked for.

In a discussion before the Dresden Association, the physicians declared that they had been unable to prove any benefit whatever in tuberculous cases from transfusion with lamb's blood; indeed, in many of the cases

* Transfusion of Blood. Petersburg, 1873.

† Transfusion of Lamb's Blood into the Human Species. Petersburg, 1874.

the condition was much worse subsequent to the operation.

Nor do they regard it as productive of any possible good in cases of pyæmia or septicæmia. Drs. Fiedler and Birch-Hirschfeld do not regard the question of the utility of lamb's-blood transfusion as being settled conclusively, but as offering a fruitful field for future investigation. In the mean time, they express dissent from the opinion of Gesellius, that "lamb's-blood transfusion will inaugurate in medicine a new era,—the era of blood-giving,"—and think that from the present aspect of the question it will be much more likely to attain the title of "Ephemera" in medical history.

F. W.

ACTION PRODUCED UPON THE SKIN BY VARIOUS TRAUMATISMS.—Dr. Bloch publishes, in the *Archives de Physiologie*, January and March, a communication on this subject, giving the details of various experiments, and his conclusions therefrom, which are as follows:

1. Traumatism by pressure, frictions, percussion, feeble or violent, even followed by ecchymosis or hemorrhage, produce capillary congestion almost immediately.

2. The application of heated bodies has the same results.

The effects are different according to the sensibility of the integument; and at the same temperature gases produce the least impression, liquids the most.

Liquids themselves do not all burn at the same temperature.

Pure water seems to burn at the lowest temperature, the fats at the most elevated.

Greater or less facility of imbibition on the part of the epidermis is the principal cause of these differences.

3. The application of cold, whether it be brief or prolonged, whether the cold be moderate or violent, brings about dilatation of the smaller vessels and capillary congestion almost immediately.

4. The arrest of the entire circulation, or only of the venous, has, after it has ceased, the same result. It is, besides, a means of lowering the temperature, so far as the parts below the ligature are concerned, even if this only interrupts the venous circulation. The temperature of these parts rises, on the contrary, when the circulation has been re-established.

A. V. H.

FEVER AFTER TRANSFUSION.—Paul Liebrecht (*Centralblatt f. d. Med. Wissenschaften*, 1874, No. 37) has repeated the experiments of Profs. Albert and Stricker with regard to the influence of transfusion on the temperature of dogs. Direct transfusion from the femoral artery into the femoral vein of the same animal was performed, and the temperature measured in the rectum, the dog not being fastened for the performance of the experiments. In five of the cases there was no fever, but in the remaining four the temperature rose from one to two degrees. Two of these animals had been twice already the subjects of similar experiments without having had any fever. Simple ligature of the great vessels occasioned no fever, but after transfusion the temperature rose. Transfusion from the artery into the vein of the same animal can occasion fever. Liebrecht thinks that the phenomenon can be explained by increased pressure in the cava and a consequent congestion of the portal system.

W. A.

CURE OF SALIVARY FISTULA.—Dr. Prompt submitted to the examination of the Académie de Médecine, at a recent sitting, a child twelve years of age, on whom he had recently operated for salivary fistula with success. The history of the case was as follows. The patient, while descending a staircase, holding in the hand a *vase de nuit*, had fallen, and one or more fragments of

the vessel which had been shattered penetrated the cheek, causing a vertical wound, the superior extremity of which corresponded to the cartilages of the tragus, while the inferior limit was on a level with the median lines of the jaw.

Three days subsequent to the accident, saliva was observed escaping from the wound at a point corresponding to the course of the duct of Steno. Somewhat later, two other salivary fistulæ were found, but, while these latter closed spontaneously, the original one remained patulous. Under these circumstances Dr. P. performed, three weeks subsequent to the date of the accident, an operation, by means of a fine trocar introduced within the buccal cavity, and the new canal thus formed was kept open by tents until it became permanent. The fistulous opening was then closed by sutures, and a complete cure effected.—*L'Abeille Médicale*, September 7, 1874.

A. V. H.

STERILITY IN THE MALE RELIEVED BY THE OPERATION FOR CONGENITAL PHIMOSIS.—Dr. Paul Labarthe relates, in *L'Abeille Médicale*, August 31, a case coming under his notice of a young and apparently healthy married couple whose union, after a period of several years, remained unfruitful.

Examination of the wife showed no obstacle to conception, and at length the husband sought advice from Dr. L. as to whether the difficulty lay with him rather than with the lady.

Investigation of the genitals showed congenital phimosis, the preputial orifice being narrowed to such a degree that on the patient attempting to make water the entire cavity became filled and swollen with urine, which only escaped drop by drop from the almost pin-hole aperture of exit.

Dr. Labarthe proceeded to perform the operation for phimosis, which resulted favorably. The patient subsequently informed his physician that the semen, which in coition formerly had only escaped drop by drop, was now ejected in a normal manner. Shortly after, his wife became enceinte.

A. V. H.

RECENT RESEARCHES ON RECURRENT SENSIBILITY (*Gazette Hebdomadaire*, September 4).—MM. Arloing and Tripier publish the results of a number of experiments on resections of nerves recently performed by themselves. The object of these researches was to reproduce and interpret various known facts in relation to persistence of sensibility in the integument of the human hand after section of the median, radial, and cubital nerves. The existence of recurrent sensibility in the cutaneous nerves had already been demonstrated, as well as the fact that the influence of the sensory nerves extends beyond the zone of their distribution; and, finally, that persistence of sensibility in the peripheral portion of the divided nerve and persistence of sensation in the corresponding skin are connected phenomena, neither of which exists without the other. The experiments made by MM. Arloing and Tripier were not confined to the nerves of the upper extremity; those of the lower members were also examined, as well as the nerves of the face. It was found that where section was made at a point near the periphery, the various anastomosing branches above the point operated upon continued the sensibility of the part, while at a point much nearer the nerve-centres the anastomosis was wanting and recurrent sensibility was not observed. It would follow from this that in neuralgia the nearer the point of action of the morbid agent is to the periphery, the more widely spread would the painful sensation be, while the more closely such point of action approaches the nerve-centres, the less intense (other things being equal) will be the intensity and diffusion of the same sensation.

As regards indications for operative proceeding, the following points are suggested:

1. For motor nerves, or those supposed to be such, not only should the nerves in question be divided, but also the neighboring sensitive branches which surround them with recurrent nervous fibres.

2. For sensory-motor or sensory nerves it should particularly be sought to establish whether the trunks only, or also the branches, convey the morbid influence. In the former case, simple neurotomy would suffice to interrupt the transmission of such impressions; while in the latter case, recourse should constantly be had to associate sections, but in such a way as to interrupt the different paths of transmission, without producing any more disturbance (wounds) than is inseparable from the operation.

A. V. H.

TERTIARY SYPHILITIC AFFECTIONS OF THE TONGUE.

—Dr. M. Fournier, in a clinical lecture published in the *Gaz. Hebdom.*, September 11, remarks that the tongue, though less frequently attacked by tertiary syphilis than the pharynx or the velum palati, is yet often enough involved to give the study of these affections considerable interest. The study of these forms of syphilis has been retarded in the past from the fact that they have all been included under a single morbid type. This view of their nature is, however, incorrect, since the various lesions of the tongue are quite different, and correspond exactly to the cutaneous alterations of the same period. They may be divided into two classes,—one the non-ulcerative, including gummous nodules, the other, those which go on to rapid ulceration.

1. *Ulcerative syphilides of the tongue.*—Like the ulcerations of ecthyma, these are deep; having, also, raised borders, a yellowish-gray base, sometimes regularly rounded, as when seated upon the dorsum of the tongue, at other times irregular in outline, as found upon the edges or point. They are surrounded by a red areola, around the border of which the thickened mucous membrane presents a decided feeling of resistance. This lesion may be solitary, or the ulcers may be multiple, and grouped in a crescentic form; they are usually about the size of a lentil or haricot. In spite of their small size, they are frequently painful; less so in themselves than on account of the irritative contact of food, etc. It is hardly necessary to say that their evolution is chronic.

2. *Non-ulcerative, gummous syphilides.*—This variety consists in a dry induration of the lingual derm. It is the form designated by M. Ricord under the name of *plastic glossitis*. Clinically, these nodosities are characterized by their elevation, though slight, above the surface; they are less distinguishable by this feature, however, than by modifications presented by the mucous membrane in their neighborhood. This is unusually red, smooth, level, and without villousities, often looking as if the papillæ had disappeared. The nodosities are also quite appreciable to the touch from the feeling of resistance which they transmit to the finger, showing the mucous membrane to be thickened and dense,—in a word, infiltrated by a resistant neoplasm. One or more points may be affected, and the shape of the plaques may be either rounded or irregular. Occasionally the disease takes the form of a diffuse induration, affecting a considerable portion of the tongue.

3. *Gummata of the tongue.*—Gummata of the tongue may be divided, like those of the skin, into two classes, according to the locality in which they occur, whether in the mucous or submucous tissues. Again, like those of the skin, gummata of the tongue form tumors which, at first solid and non-inflammatory, become softened at a later period, break, and yield a discharge, assuming the appearance of open ulcers.

It is a curious fact that gummata of the tongue show

a marked predilection for the dorsum of that organ, usually occurring on the median line, more rarely upon the edges, and hardly ever upon the inferior surface.

Like the other syphilides above mentioned, gummata may occur either singly or to the number of three or four, which they seldom exceed, excepting when they take the rarely-found confluent form.

In appearance, gummata of the tongue present the aspect of shot or small almond-kernels beneath the surface; occasionally they are larger. When small, the form of the organ is not altered; but when the gummata are large or confluent, much deformity may exist. As the evolution of the tumor proceeds, it approaches the superior surface of the tongue, and begins to soften. At length it breaks, and, according to the account given by patients (for this phenomenon is never observed by the physician), gives exit to a yellow, purulent liquid, sometimes grumous and streaked with blood.

The physiognomy of the ulcerated gumma of the tongue is not pathognomonic, or at least not sufficiently so to aid much in the diagnosis. Its chief features are deep ulceration with excavation of the edges, hard, thick areola, and a cartilaginous base.

Under proper treatment this form of ulcer is rapidly healed, and leaves very little cicatrix, the mucous membranes, as is known, becoming renewed more easily than the skin. Prof. Fournier's favorite remedy in this class of cases is mercury in one of its various forms.

A. V. H.

THERAPEUTIC NOTES.

BROMIDE OF POTASSIUM IN THE TREATMENT OF MALIGNANT ULCERATING TUMORS.—M. Peyraud recommends the use of solutions of bromide of potassium, to be applied to malignant ulcers in the form of spray.

He maintains that it acts as a sedative upon the nerves, thus relieving pain, while at the same time it exerts a contracting effect upon the capillaries and a slight but beneficial caustic action on the general surface of the wound.

CATHARTIC ELECTUARY FOR USE IN THE LATER PERIOD OF DISEASES OF THE HEART.—

R Pulv. sennæ;
Pulv. jalapæ;
Pulv. scammonii;
Pulv. gambogiæ;
Mel. desumat.—M.

Sig.—Two to three tablespoonfuls every morning.

This formula is suggested by M. Peter in the later period of heart-disease, where there are multiplied visceral congestions, and where diuretics and drastics are indicated.

SULPHUROUS ACID AS A DRESSING FOR RECENT WOUNDS.—The following formula was used with great satisfaction in various parts of France during the late war:

R Acidi sulphurosi, f3ss;
Aqua, Oi.—M.

Apply in the form of lotion, or by means of an irrigator. This solution is particularly useful in wounds where there is much suppuration, or where cicatrization takes place slowly.

INTERSTITIAL INJECTIONS OF ACETIC ACID IN MUCOUS POLYPI OF THE PALATE.—A few drops of the ordinary acid are to be introduced daily into the tumor, by the aid of a hypodermic syringe. The pain is intense for a few moments, but soon subsides, and one or two weeks usually suffice for cure.—Dr. Méplain, *Trib. Médicale*, No. 307, 1874.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, OCTOBER 10, 1874.

EDITORIAL.

MEDICAL EDUCATION.

IF there is one thing more than another upon which the editorial wisdom of the *Philadelphia Medical Times* has come to a fixed conclusion, it is the worthlessness of the American system of medical education. If there is any one editorial purpose more definitely settled than another, it is that whatever of influence this journal may possess shall be used to aid in effecting a radical change in that system. Tersely, the method may be said to be a pitting of one college against the other in a race for students,—a race whose success often depends not so much upon the ability of the faculty to teach, and the opportunities afforded for study, as upon the ease with which the coveted M.D. is granted. The average American bows at the shrine of “getting on,” and to get on means to get money. Very often the medical student is poor, so that he is doubly spurred by his inborn genius for getting on and by the necessities of the case; he *must* have his diploma as soon as possible. Once the coveted parchment in his possession, he will trust to his wits and industry. And, to give him credit, his “wits” rarely fail him, for we honestly believe the great gift of Providence to this nation, or, to speak in the terms of the popular science of the day, the great product which the circumstances of races, life, and climate have evolved on this continent, is “wits.”

The professors' emoluments depending upon the number of students, and the professor having the sole right of fixing the standard of attainment

necessary for graduation, the result must inevitably be a gradual cheapening of the bait. Medical education is in a bad enough state in the East, but in the West its condition seems to be worse. We hope we shall not offend the delicate sensibilities of any of our Western editorial brethren in saying this. It certainly cannot truthfully be denied that the colleges in that section have been underbidding one another in the matter of lecture-fees, until only forty, twenty-five, or even twenty dollars, instead of one hundred and forty dollars, are asked for a whole winter's course.

When professors or faculties, for the sake of outstripping their competitors, strip themselves of that which is so dear to every man, a proper recompense for work, it is easy to perceive what will be the decision of questions concerning the requirements for graduation: the major, the good of self, usually embraces the minor, the good of others.

We are loath to believe that matters are so bad anywhere as is represented in the extract which we append to the present editorial; yet it is from the pen of one whose wounded honor has asserted that personal indignities alone can repay the insult offered to the West by the editor of this paper in stating that the Eastern medical centres contain more prominent men than the Western,—a fact which, we may state *en passant*, is due not to any intellectual difference between the men of the two regions, but simply to the same cause that occasions more corn to grow in crooked than in straight rows.

A gentleman so zealous for the honor of his section as is the author of the following extract surely cannot in any wise have exaggerated the imperfections that may exist in the institutions of his State. Yet what he says (*American Medical Weekly*, Sept. 29, 1874) is said of Louisville, the famous and ancient centre of medical teaching in the West,—a centre whose history is illumined by some of the most distinguished of American professional names:

“It were well that medical classes could assemble, and be taught, and be sent again to their longed-for homes without any other exhibition than that of harmony, without any other manifestations before them than those of dignity and self-respect. But this great desideratum, so much hoped for, so much sought, has not yet been attained. Sad is it to state what a regard for the truth compels the candid writer to declare: no sooner do the classes assemble than there begins that unworthy struggle for numerical success which at once characterizes, while it degrades, almost every city wherein medical students are congregated. Men calling themselves teachers discredibly struggle to swell the number of students in their respective colleges. In all cities it is censurable; in some, it is disgraceful in

the extreme. Each critic must write as he can truthfully write. In this city, the struggle mentioned is demoralizing and utterly disgraceful. No sooner does twilight mantle the streets in obscurity than men calling themselves teachers and gentlemen are seen coming out like shameless prostitutes and foul birds of the night seeking their prey. They may be seen in all the private boarding-houses and in the hotels of the city. Aliens to self-respect and decency, lost to all sense of shame, they have but one object: by deceptions and falsehoods, by unblushing effrontery and cowardly devices, to lure young men seeking this city for a medical education to their colleges."

What a pride we ought to feel in our most noble profession! What an inborn tenacity of honor it must have,—what an immensity of intrinsic respectability and high estate,—that, recruited by such means, entered through such portals, it can still magnify itself in the eyes of men!

DEATH OF DR. ANSTIE.

IN our last issue the death of Dr. F. E. Anstie, of London, was announced, but the cause of his death was mis-stated, owing to the incorrectness of the first statements of the London medical press. It appears that the doctor died of blood-poisoning, due to a dissecting-wound. Dr. Anstie pricked his finger with a needle whilst making an examination on Sunday, September 16, at Wandsworth, of the body of a child who had fallen a victim to the malignant epidemic in the investigation of the causes of which he had spent the morning, greatly exposed to sewer-gases. The wound was at once washed and sucked, but on Wednesday the doctor commenced to feel ill, and complained of pain in the right arm-pit. Chilly feelings later in the day became very prominent, and the pain and soreness of the arm increased very greatly. Thursday the patient was confined to his bed, and Mr. Brudenell Carter found him with a dry tongue, a dry, hot skin, and complaining of distressing headache and of much pain over the right pectoral region. During the day the symptoms increased in intensity. After a restless night the patient was still worse on Friday, and the assistance of Dr. George Johnson was obtained, who has since furnished the London *Lancet* with the following statement:

"I first saw Dr. Anstie with Mr. Brudenell Carter at 3 P.M. on Friday, the 11th inst. He was then delirious and quite unable to give a history of his illness. The tongue was dry; the temperature 105°; there was an erysipelatous blush about the size of the palm of the hand over the right pectoral muscle; there was excessive tenderness on pressure in the right axilla, and over

the front of the chest on the right side; the slightest movement of the arm elicited a cry of pain; there was no appearance of inflammation about the wound on the hand or up the arm. At half-past nine in the evening I again saw the patient, in consultation with Dr. Burdon Sanderson and Mr. Carter. His condition remained unchanged. At half-past nine on Saturday morning I again met Mr. Carter. We found the breathing was very rapid; there was a distinct friction-sound over the middle and lower lobe of the right lung, and dulness on percussion over the same space; the erysipelatous redness and the tenderness on pressure remained the same. The urine was highly albuminous, and contained numerous epithelial casts. About the middle of the day symptoms of a blood-clot at the right side of the heart came on; the features were livid; the breathing rapid and shallow; consciousness was rapidly lost, and death occurred at half-past 2 P.M."

No post-mortem was made.

Dr. Anstie was born in December, 1833, and was, consequently, not quite forty-one years old at the time of his death. He was just reaching that pecuniary success which follows in most cases what may be termed professional success. It is stated that some years since a very determined effort was made to induce his acceptance of a professorship in New York city.

ERRATUM.—By some unaccountable mistake, the production of the paper on carbolic acid, in a recent issue, was credited to Dr. W. H. Winslow, Baltimore. We do not know that there is a physician of that name in that city: certainly the paper was written by Dr. W. H. Winslow of this city.

CORRESPONDENCE.

ON THE USE OF BELLADONNA AND OF CHLORAL AND BROMIDE OF POTASSIUM IN ASTHMA.

BOSTON, September 26, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Dr. Wood's experience as to the superior efficacy of belladonna as a remedy in spasmodic asthma, communicated to your valuable journal of the 19th inst., is quite in accordance with my own. May I take the liberty of adding that I find the most prompt and effectual way of administering it is inhalation by means of an atomizer? I was induced to try this method, some years since, in the case of Dr. Derby, the late lamented Secretary of the Board of Health of this State. When he consulted me he had been suffering for six weeks from attacks of spasmodic asthma, which compelled him to rise at about one o'clock A.M. and pass the rest of the night without sleep, by his furnace fire, smoking cigars. He had lost much flesh,

and was a good deal exhausted by the want of sleep. After trying various remedies without much relief, I suggested to him to inhale a mixture of a drachm of fluid extract of belladonna to an ounce of water, by means of an atomizer, as soon as the next attack began. I recommended the extract in preference to the tincture, as it is much stronger and appears to be more reliable. Dr. Derby, however, employed the tincture, and the very first experiment was a complete success. When he retired at night he placed his atomizer, with the belladonna-mixture, by his bedside, in readiness for the emergency. At one o'clock the paroxysm came, and he immediately had recourse to the atomizer. In fifteen minutes he was entirely relieved, and fell asleep, to awake again at six o'clock, with a light return of the asthma. A second inhalation relieved him in five minutes, and he fell asleep again. The next day I found him much refreshed and jubilant, feeling that the spell was broken. He had no recurrence of the asthma after that time, but felt that he had a certain remedy, should it ever return, in the belladonna-inhalation.

I ought to say that Dr. Derby had for many years been asthmatic, being one of the excessively susceptible class in whom a paroxysm is induced by the proximity of a cat or a dog, or even of a horse. During the late war, in which he served with great distinction, he told me that he could not inhale the breath of his horse, or handle him in any way, without oppressed breathing.

It seems to me that the inhalation of belladonna has a decided advantage over its administration by the mouth, in that it acts directly upon the affected parts at the same time that it enters the circulation more promptly through the mucous membrane of the lungs. Again, its use can be exactly guided by its effects. The inhalation can be stopped at once on the occurrence of any of the uncomfortable physiological symptoms which it is liable to cause; in other words, the dose can be limited to precisely the quantity needed to produce the desired effect.

At the time when Dr. Derby first employed it, examination of his chest showed universal strong resonance on percussion, very feeble respiratory sound, and very abundant fine sibilant râles,—a pure case of spasmodic asthma.

With regard to the use of chloral and bromide of potassium together as a sedative in these and other cases of chest-affection, I would say that I have repeatedly used this combination, and I dare say it has occurred to many others to employ it. During the present autumn, some of my patients who are victims of "autumnal catarrh" have found great comfort from it. The addition of a little morphia adds to its efficacy, and in one instance at least, that of a lady who is very susceptible to the disagreeable after-effects which opiates so often produce, the chloral and bromide seem to prevent their occurrence entirely.

Very respectfully,

Your obedient servant,

S. L. ABBOT, M.D.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPT. 10, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

THE Chairman of the Committee on Morbid Growths, Dr. R. M. BERTOLET, read the following reports:

"1. *Report on the button-like prominence upon the inner wall of the cavity, presented by Dr. Pepper, June 25, 1874.*—This has been hardened and sections made. The central portion of the node is occupied by a firmly coagulated blood-clot, while the thick limiting membrane is made up of a layer of fibrinous connective tissue, succeeded by a stout layer of non-striated muscular fibres arranged in longitudinal and transverse rows; thus at once suggesting the middle and outer coats of an artery. No traces of the tunica intima are discernible, nor could any communication with the lumen of the blood-vessels beyond be satisfactorily established. Your committee are undecided whether to regard this prominence as an aneurismal dilatation, or as the stump of a larger artery formerly traversing the vomica and now filled with an embolus. In either case it probably proved the source of the fatal hemorrhage.

"2. *Supra-renal capsules, presented by Dr. F. P. Henry, June 25.*—The microscopical examination of the enlarged supra-renal capsules accompanying Dr. F. P. Henry's specimens from a case of Addison's disease exhibits an excessive development of the stroma into fibrillated connective tissue, which is marked with small-cell infiltration. At numerous points large cheesy foci, composed of granular detritus, are seen in varying degrees of softening. No miliary tubercles were detected. There is almost complete destruction of the parenchymatous glandular structure; though towards the cortex long parallel cell-columns are found at great intervals.

"We have here to deal with that alteration of the supra-renal capsules most frequently observed in morbus Addisonii,—viz., *cheesy fibrinous metamorphosis* of these glands. It may be here remarked that this cheesy fibrinous degeneration is very liable to be associated with tubercles in these glands themselves, or else it is complicated with general tuberculosis. According to Klebs, this association of the two diseases occurs about in the proportion of two to one.

"3. *Cystic kidney, presented by Dr. Willard, June 25.*—The cystic kidney presented at the last meeting has been examined by your committee; the thick walls of the cysts are made up of a dense, fibrillated basement-membrane, and are lined upon the inner surface with flat polygonal epithelial cells. The surrounding uriferous tubules are greatly displaced, often entirely obliterated, by the excessive proliferation of the interstitial connective tissue; their epithelial covering is seen in the various stages of fatty infiltration and disintegration, while their lumen is not unfrequently occupied by fibrinous cylinders; here and there, however, traces of a secreting parenchyma are visible.

"As to the soft, cheesy, white mass contained in the large cystic cavity of the cortical substance, it is found to be made up in greater part of fat- and pigment-granules, of epithelial detritus, colossal cholesterol tablets, and amorphous granular matter; the latter, consisting of carbonate of lime and a colloid substance, yielding the albuminoid reactions. It contains no uric acid or other crystalline products of the urine."

Patulous foramen ovale, and thickened and attached pericardium.—Dr. WHARTON SINKLER presented the specimen, from Mrs. L., æt. 60, who was admitted to

the medical wards of the Episcopal Hospital, February 18, 1874. She was suffering from dyspnoea, anasarca, and showed a constant disposition to sleep. The circulation was sluggish, and a general venous turgescence existed. The urine contained albumen. The patient died July 28. At the autopsy the kidneys exhibited the characters of the contracted granular kidney. The lungs were healthy. The pericardium was firmly attached to the heart throughout, and was thickened. There was a communication between the auricles through a patulous foramen ovale. The opening was valvular, and it is not likely that during life there was any passage of blood from one auricle.

Hypertrophy of the heart ; pericarditis, with enormous thickening of the pericardium.—Dr. SINKLER presented the specimen, from A. B., admitted to the Episcopal Hospital July 8, 1874. He complained of pain in the back and around the base of the chest. There was no tenderness over the liver, but the area of hepatic dulness was lessened. There were anorexia, nausea, and at times diarrhoea. The emaciation was extreme, but there was no dropsy. Patient acknowledged to having been a hard drinker of undiluted spirits. There was no cardiac murmur detected, and the heart's impulse did not appear to be increased. A diagnosis of cirrhosis of the liver was made. He gradually lost strength, and a few days before death the gastric derangement increased and there was some diarrhoea.

On August 26 he was confined to his bed, and complained of weakness. On the 28th he was delirious, stupid, and disposed to sleep. He refused all food except small quantities of punch. The symptoms increased in severity, and death supervened on September 4, the patient having been comatose for forty-eight hours previous.

The *post-mortem* was made five hours after death. The *lungs* were firmly attached to the walls of the thorax by old adhesions, and there were scattered tubercles throughout both. The *kidneys* were large, but appeared healthy. The *heart* was hypertrophied. The *pericardium* was attached to the lungs. Both layers of pericardium were greatly thickened, and presented the appearance of fatty degeneration. Binding these layers strongly together was a thick deposit resembling a partially organized clot, of a reddish color and of firm consistence. The thickness of the pericardium, including the deposit of new tissue, was five-eighths of an inch. The left ventricle was three-fourths of an inch, and the right one-half inch thick. The length of the heart was seven inches, and its greatest circumference ten and a half inches. The liver was somewhat contracted, and was a well-marked specimen of cirrhosis.

Extensive disease of mitral valves ; auricular vegetation.—Dr. SINKLER also presented this specimen, from Maggie L., æt. 16, who was admitted to the Episcopal Hospital January 13, 1874. She had suffered from a severe attack of acute articular rheumatism, and on admission had violent dyspnoea on the slightest exertion. There was a dry cough. The heart was hypertrophied, and an unusually loud murmur was heard all over the præcordia, with the systole and diastole. The murmur was loudest at the apex, and was heard with distinctness at the inferior angle of the scapula. It diminished in intensity towards the sternum.

On August 24 she had another attack of articular rheumatism, and complained of pain in the præcordia. Death occurred on the 30th.

On *post-mortem* the left lung was found bound down by old adhesions, and there was a tubercular deposit at the apex. The pericardial sac was obliterated by a recent formation of lymph. The tricuspid valves were partially adherent. The leaflets of the mitral valve were thickly covered with vegetations of a calcareous nature, and extending into the left auricle were exten-

sive villous vegetations, the lower half of the anterior surface of the endocardium being covered by the vegetations. Aortic valves healthy.

The PRESIDENT said that there were two or three points of interest in connection with these cases constituting the group an extraordinary one. Two of the cases exhibited universally adherent pericardium, and in another the pericardium was partially adherent. Universal adhesion of the pericardium is of itself a comparatively rare affection. In one of the specimens the appearances indicated the presence of the rare form of pericarditis known as "hæmorrhagica." Before pronouncing positively upon the nature of the clot-like layer which invests the body of the heart, he would refer the specimen to the Committee on Morbid Growths.

Another point was the occurrence of vegetations on the auricular endocardium, quite independent of the valves, —a condition rarely met. The question of presystolic murmurs has attracted so much attention of late years that the presence of the vegetations becomes of double interest. He thought it highly probable that a considerable portion of the murmur in this case depended upon these vegetations. A third point of interest was the fact that a patulous foramen ovale should be presented in a person of such advanced age as sixty. Dr. P. agreed, however, with Dr. Sinkler in attributing no great practical significance to this lesion. Several years ago he made several hundred examinations of the condition of the heart, noting carefully in each instance the condition of this foramen. In a considerable proportion of cases he had found it patulous in persons of advanced years, occasionally with, but as often without, coincident heart-disease.

Dr. J. EWING MEARS asked whether in those cases of patulous foramen which attended heart-disease there was any relation between the two.

The PRESIDENT replied that when he had found this condition present in cases of heart-disease it had seemed to be usually associated with one of two conditions : 1, excessive dilatation of the auricular cavities, when the opening in the valve might be caused by atrophy due to excessive stretching, just as small perforations are found near the free border of the aortic valves in cases of great dilatation of the orifice of that vessel ; or, 2, an excessive degree of intra-cardiac tension, due to obstructive valvular disease, and operating unequally on the cavities of the right and left sides of the heart, in which case the strain might cause a separation of the valve of the foramen at its point of weakest attachment. In still other cases, a small opening in the valve might persist from infancy.

The thickened blood-stained pericardium was referred to the Committee on Morbid Growths, which reported September 24, 1874 :

"The thick pericardial covering upon the heart, presented by Dr. Sinkler, is composed of laminæ of corpuscular elements (leucocytes) enclosed in the meshes of the interlacing, delicate fibres of organized fibrin. This covering is therefore to be regarded as an inflammatory product."

Tumor involving the parotid gland and masseter muscle.—Dr. J. EWING MEARS presented the specimen, which he had removed from a male patient, aged 58, at St. Mary's Hospital. A description of the specimen will appear in a forthcoming number of the *Medical Times*. It was referred to the Committee on Morbid Growths, which reported September 24, 1874 :

"The large tumor removed from the parotid region on September 10, by Dr. Mears, is made up of large round and spindle-cell elements ; the sparse interstitial substance is finely fibrillated.

"Some of the sections reveal the presence of a glandular tissue and ducts lined with cylindrical epithelium, thus leaving little doubt of the involvement of the paro-

tid gland. There is apparently no excessive development of the epithelial lining, no budding out of epithelial processes; but, on the other hand, the glandular cells are widely separated and compressed by the abundant development of the sarcomatous cells in the connective tissue.

"The sarcoma has likewise invaded the masseter muscle, and here it also seems to spread along the connective tissue mainly, though in a few of the muscular fibres beneath the sarcolemma were seen extending the large nucleated bodies, as if the sarcomatous elements were undergoing a similar transformation.

"Further study of these sections will, however, be requisite before your committee can pronounce with any degree of certainty on this point. Many of the muscular fibres are irregular in outline, swollen and contorted; their striations are obliterated, a so-called 'amyloid degeneration' having taken place. This condition has often been noted in muscular fibres that are being encroached upon by new growths."

Osteo-sarcoma of the lower jaw, involving the ramus, angle, and a portion of the body.—Dr. MEARS presented the specimen, which he had removed from a boy, æt. 14. A description will appear in a forthcoming number of the *Medical Times*.

Dr. MEARS further said that in this case the diagnosis was sarcoma, the jaw presenting the stony hardness of such growths. But the diagnosis in this situation is at all times difficult. Where the lymphatics over the parotid are the seats of disease, the movability of the growth aids a decision. Last summer he had removed a tumor, as large as a Sicily orange, from directly over the parotid, and he was confident that it did not involve the gland, from this circumstance.

The PRESIDENT asked whether the degree to which the mouth could be opened could be of assistance in the diagnosis of these cases.

Dr. MEARS said that in the last case there was almost entire occlusion: it being possible only to introduce the handle of a scalpel between the teeth. He had thought the occlusion due, in these cases, to an involvement of the masseter muscle.

The PRESIDENT replied that the question had been suggested by the fact of the extreme occlusion which attends the implication of the parotid in medical cases. He thought it might be possible to draw an inference as to site of growth from the presence or absence of this difficulty. A tumor of the periosteum, for example, we would primarily suppose less likely to prevent opening of the jaws than one more directly involving the parotid or the muscles.

The specimen was referred to the Committee on Morbid Growths, which reported, September 24, 1874:

"The series of small tumors removed by Dr. Mears from a patient æt. 14 present, as suspected, the well-known microscopic appearances of the round-cell sarcoma; but only in such a subordinate manner that your committee, in making this their preliminary report, are inclined to view it as a mere sarcomatous degeneration of the striated muscular fibres which make up the bulk of the growth,—in short, are seen in sections made in every possible direction. Should this prove, upon further investigation, to be the case, then it must be pronounced a *myosarcoma*."

REVIEWS AND BOOK NOTICES.

ESSENTIALS OF THE PRINCIPLES AND PRACTICE OF MEDICINE. By HENRY HARTSHORNE, M.D. Fourth Edition. H. C. Lea, Philadelphia, 1874.

A book which reaches its fourth edition in seven years certainly may be looked upon as a pecuniary

success,—a success which the present volume has deserved, in that it is the best of its class,—albeit that class is, to our thinking, of doubtful value.

SELECTIONS.

CASE OF FATAL POISONING BY AN OVERDOSE OF GELSEMINUM SEMPERVIRENS.

AUGUST 20, 1874, Frank R., æt. 24, took for neuralgia, at 1 o'clock A.M., a teaspoonful of Tilden's fluid extract of gelseminum, and in about fifteen minutes repeated the dose. The pain was soon relieved, and his eyes felt heavy, but in about half an hour he began to complain of choking, and soon arose struggling for breath, pushing his fingers into his throat as if trying to tear it open. He staggered, reeling from one room to another as though intoxicated, and in a short time after these symptoms came on he threw himself upon the floor and became unconscious. This is the history of the case as I received it from his family.

I was summoned about 3.45 A.M., and reached the house at 4 A.M. Found patient moribund, respiration gasping, three or four per minute, pulse rapid and feeble. He was totally unconscious, and could not be roused; pupils dilated, not responding to light, and could be touched without producing any contraction of the lids. Muscles relaxed, lower jaw drooping. Skin moist, extremities rather cold.

As the patient was so far gone, as the dose had been swallowed three hours before and was probably all absorbed, and as there was such complete insensibility, I considered it useless to try emetics. I laid him upon his back with head upon floor, dashed cold water upon face and chest to excite respiration. Gave brandy-and-water in small quantities frequently, and five grains of carbonate of ammonia every five minutes. Mustard to spine, and friction upon extremities. The respirations became more infrequent, and the pulse grew slower and weaker. Artificial respiration was kept up for half an hour, but without avail, and he died at 4.45 A.M. No convulsions at any time.

Autopsy, five and a half hours after death.—Body well nourished, rigor mortis well marked. The blood was very fluid and dark-colored, and showed no tendency to coagulate or to turn red upon exposure to the air, even after standing in a large tub for two hours. Heart, lungs, spleen, kidneys, normal. Liver dark-colored, and contained much fluid blood. Stomach contained four ounces of light-colored fluid mixed with glairy mucus. Its internal surface was deeply congested, and marked by tortuous dilated vessels. Intestines normal. Brain rather pale. Sinuses not congested. The internal substance of the cerebral lobes was dotted here and there with small red points, but these were not sufficiently large or numerous to be considered of much pathological importance. No collection of fluid in ventricles. —J. T. Boutelle, M.D., in *Boston Medical and Surgical Journal*.

ICE IN PAINFUL CONDITIONS OF THE BLADDER AND RECTUM (*The Chicago Medical Journal*, September, 1874).—Dr. Henry M. Lyman reports cases of internal piles, irritable bladder, recto-vaginal abscess, and vesical irritation, caused by cantharidal poisoning, in all of which great and immediate relief was obtained by the employment of ice suppositories either in the rectum or vagina; and when their use was persevered in, a complete cure resulted.

GLEANINGS FROM OUR EXCHANGES.

IPECACUANHA SPRAY IN WINTER COUGH AND BRONCHITIC ASTHMA (*The Lancet*, September 5, 1874).—Dr. Sydney Ringer and William Murrell have obtained excellent results from the use of ipecacuanha-spray in winter cough, a typical case of which disease they describe as follows:

The patient has been troubled with winter cough perhaps for many years. During the summer he is pretty well; but during the cold months, from October to May, he suffers sometimes without intermission, occasionally getting a little better, and then catching cold; or perhaps he may lose his cough for a few weeks, but again takes cold on the slightest exposure. So short is the breathing that he can walk only a few yards, especially in the cold air, and finds it hard work to get up-stairs, and is often quite unfitted for active life. The breathing grows worse at night, so that he cannot sleep unless the head is propped up with several pillows. He is troubled, too, with paroxysmal dyspnoea, usually at night, which may last several hours, and compels him to sit up. Sometimes the breathing is difficult only on exertion; and in those cases it is made much worse by fogs, east winds, or damp. The expectoration varies greatly: in a few cases there is very little; usually, however, it is rather abundant, and consists of mucus or pus, often with little or no rhonchus in the chest. It is often difficult to expel the expectoration. The cough is generally very violent, frequent, hacking, and paroxysmal, and the fits may last ten or twenty minutes, and even excite vomiting. They are generally brought on by exertion; nay, in bad cases so easily are they provoked that the patient is afraid to move, or even to speak. The cough and expectoration are much worse in the morning on waking. Sometimes the cough is slight, and then the expectoration is generally scanty, the distressed breathing being the chief symptom. The patient generally wheezes badly, especially at night, and in a bad case the legs are swollen. The patient is emphysematous; there is often no rhonchus, or only sonorous and sibilant or a little bubbling rhonchus at both bases.

In such cases the ordinary spray-producer was used, with ipecacuanha wine pure or variously diluted. On the first application it sometimes excites a paroxysm of coughing, which generally soon subsides, but if it continues, a weaker solution should be used. The patient soon becomes accustomed to it, and inhales the spray freely into the lungs. At first a patient inhales less adroitly than he learns to do afterwards, as he is apt to arch his tongue so that it touches the soft palate, and consequently less enters the chest than when the tongue is depressed. The spray may produce dryness or roughness of the throat, with a raw, sore sensation beneath the sternum, and sometimes it causes hoarseness; whilst, on the contrary, some hoarse patients recover voice with the first inhalation. As they go on with the inhalation, they feel it getting lower and lower into the chest, till many say they can feel it as low as the ensiform cartilage.

The dyspnoea is the first symptom relieved; but soon the cough and expectoration are lessened, and then disappear. The inhalation should be used at first daily, and in bad cases twice or thrice in the day; afterwards, every other day suffices, and the interval may be gradually extended. If the ipecacuanha wine is diluted, then the spray must be used a longer time. In cold weather the wine should be warmed.

All but one of twenty-five patients were benefited. In one case the improvement was very gradual, but there was evident temporary improvement after each inhalation. In twenty-one cases the average number of inhalations required was 9.4, and the average num-

ber of days was twelve, before the patients were discharged, cured. The greatest number of inhalations in one case was eighteen, and the smallest three. The case longest under treatment required twenty-four days; the shortest, four.

In bronchial asthma very satisfactory results have been obtained by the same means.

DETERMINATION OF THE SEX IN UTERO (*Chicago Medical Journal*, September, 1874).—As the result of observations in fifty obstetrical cases, Dr. D. A. K. Steele has come to the following conclusions:

1. In the majority of cases *male* foetal hearts are slower than *female*.

2. 132 foetal pulsations per minute is the average dividing line. Below this, 68½ per cent. are male; 20 per cent. female; 11½ per cent. doubtful. Above this, 53½ per cent. are female; 26½ per cent. male; 20 per cent. doubtful.

3. The most accurate observations are made during the last four weeks of gestation.

4. The rapidity of the heart's action is increased in proportion to the feebleness of the foetus.

5. Calcareous or fatty degeneration of the placenta renders the pulsations feeble and irregular.

6. In some cases it would be possible to diagnose diseased conditions of the placenta from careful observation of the foetal heart.

The sounds of the foetal heart may be rendered feeble by thick abdominal walls, tense abdominal muscles, or the presence of a large quantity of amniotic fluid.

The attachment of the placenta may be determined by the soufflé, a soft blowing murmur, synchronous with the maternal heart-beat.

The weight of the child does not increase the force of the foetal heart. During labor the foetal heart becomes accelerated and irregular in its action. The most accurate diagnosis was the result of repeated observations, as the foetal heart might be accelerated in its action by temporary excitement during a single examination.

LOCAL POISONING BY LEAD.—Dr. A. Manouvriez, having inquired into the experience of thirty workmen who from the nature of their occupations were brought more or less into contact with lead, has come to the conclusion that possibly all the local symptoms of paralysis, change of sensibility, etc., are the result of the direct absorption of the poison through the skin. In those who were right-handed, it was always the right upper extremity that was affected; while in the left-handed the symptoms were, for the most part, confined to the left upper extremity. A worker in white-lead, whose feet were most frequently brought into play (in the process of stamping), was first affected in these parts. Two right-handed workmen happened to be seized with paralysis in the left arms and hands, but in their case it transpired that it was the left upper extremity which had come in contact with the lead.

In view of these observations, we are justified in asserting that by applying an artificial protection to the skin of lead-workers we may be able to afford an efficient prophylactic against lead-poisoning.—*Gaz. des Hôpitaux*, May 7, 1874.—*Boston Medical and Surgical Journal*.

ARTIFICIAL PRODUCTION OF DIABETES (*The Lancet*, August 29, 1874).—Dr. Pavy has found that the injection of defibrinated arterial blood into the portal system occasions a saccharine state of the urine. In one experiment, the urine after the operation contained fifteen grains of sugar to the fluidounce, and in others the quantity has amounted to nearly the same. In the counterpart experiment of injecting defibrinated venous

blood into the portal system, the urine showed no signs of the presence of sugar. It thus appears that oxygenated blood passing to the liver causes an escape of sugar from the organ, and thence an accumulation in the system and discharge with the urine. It also appears that through the medium of the respiration of oxygen he has succeeded in inducing a sufficiently oxygenated state of the blood to similarly give rise to the production of saccharine urine. He has further found that through the agency of the inhalation of puff-ball smoke an immediate and strongly diabetic state may be induced, and that the effect is accompanied with such a modification of the circulation that the blood flows through the vessels, as is the case after section of the sympathetic, without becoming properly de-arterialized. His experiments, he considers, suggest that, in diabetes of the human subject, the blood, in consequence of vaso-muscular paralysis, is allowed to reach the portal vein in an imperfectly de-arterialized condition, and thus determines the escape of sugar from the liver.

PARALYSIS AGITANS (*The Dublin Medical Journal*, July, 1874).—Mr. Rankin reports a case of paralysis agitans, occurring in a man aged 72, by occupation a carpenter, who had first been affected with bronchitis, and then complained of great and increasing tremor in both hands and arms. This lasted for some time, so that he could not even lift a cup of water to his mouth. Tonics were tried, and improved the general health, but had no effect on the shaking. Hypodermic injections were then commenced of five minims of a solution of equal parts of water and the liquor arsenicalis, and were given every second day. After the third injection the patient was able to lift a tumblerful of water to his mouth, and could close both his hands without tremor. He complained, after the second injection, of tenderness of the conjunctiva of both eyes, showing that the arsenic was beginning rapidly to take effect. He was soon able to resume his ordinary work.

CO-DEVELOPMENT OF INTRA- AND EXTRA-UTERINE PREGNANCY (*St. Louis Medical and Surgical Journal*, August, 1874).—Dr. John T. Hodgson reports the case of a healthy female, æt. 27, in whom the early symptoms of pregnancy were attended by the development of a sensitive tumor within the pelvis, and to the left of the uterus, and which enlarged at the same time with the latter. For two months she had great pain in the pelvic region, with nausea and vomiting, and grew very weak. At the end of that time both the uterus and tumor had arisen out of the pelvis, and the outline of the right enlargement could be distinctly traced as continuous with the neck of the uterus, while the tumor to the left, though closely pressed against the other, was distinct.

It then ceased to enlarge, and gradually diminished in size, but remained tender to pressure, and in a month or two presented some irregularities in form, that had not before been observed.

At the proper period the woman was delivered of a healthy living child, the tumor having decreased until it was no larger than a lemon. A year later it was about the same size, somewhat irregular, a little sensitive to touch, moving freely with the uterus, lying higher in the pelvis than that organ and pushing it to the right. The case was believed to be one of tubal pregnancy, in which the sac burst about the fifth month without much hemorrhage; the fœtus died, and a limited peritonitis occurred.

MUSHROOM-POISONING (*The Cincinnati Lancet and Observer*, October, 1874).—Dr. D. B. Jackson reports three cases of poisoning occurring in children aged respectively eight, ten, and twelve. About fifteen minutes

after eating some mushrooms they all vomited, and then became sleepy and stupid. The younger two were purged somewhat; the eldest had one convulsion. They all went to sleep in a few moments, and when seen two or three hours later lay unconscious, with upturned eyes, swollen faces, and coated tongues. Reflex action was abolished, and the ability to swallow was almost gone. Tannin was given as an antidote, with an emetic of sulphate of zinc, strong tea in large quantities, compulsory exercise, and cold douches to the head and spine. These remedies were persevered in for about three hours, when the narcotism disappeared and the patients were found to be out of danger.

NOTES AND QUERIES.

WE have been asked to give room to the subjoined notice, and in doing so take occasion to remind our city readers that the Academy is at present in great need of a few thousand dollars to enable it to roof in its new building. It would be a disgrace to our city if this should not be obtained; and as many of the Philadelphia naturalists have been among the brightest lights of our profession, we, as physicians, ought to be doubly interested in the matter. The smallest contributions will be acceptable, and may be sent to Dr. W. S. W. Ruschenberger, hall of the Academy. Some who cannot themselves give may be able to obtain one or more subscriptions from their friends or patients.

"ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA.—The matriculants of all medical schools established in Philadelphia are admitted to the museum of the Academy of Natural Sciences of Philadelphia on exhibiting their matriculating tickets at the door.

"The museum is open on Tuesdays and Fridays, from ten o'clock A.M. till sunset."

A NEW CHARITY has been started in this city, under the name of the Gynæcological Hospital and Infirmary for Diseases of Children. The title sufficiently indicates its object. The corporators are John Pearce, James Moore, John J. Reese, William S. Reyburn, D. Hayes Agnew, Thomas Dolan, John Robbins, J. A. McFerran, Theo. H. Seyfert, M. Simpson, L. P. Hornberger, Joseph Singerly, Dilwyn Parrish, and S. Flanagan.

OBITUARY.

DR. WASHINGTON ATLEE HOFFMAN, Physician to the City and Port of Philadelphia, whose death has already been announced in the *Times*, was a graduate of Amherst College, in the class of 1864, studied medicine and languages at the University of Göttingen for about two years, and graduated in medicine at the University of Pennsylvania in the class of 1868. Shortly after his graduation he was elected one of the Resident Physicians to the Philadelphia Hospital (Blockley). Since the expiration of his term of service at that institution, although only thirty years of age at the time of his death, he has held various public positions, among which were Physician to the Charity Hospital and Physician to the German Hospital, to which position he was elected only a few days before his death. He was appointed by the late Governor Geary Surgeon-in-Chief, with the rank of Major, of the First Brigade, under the command of General Bankson, and in January, 1873, he was appointed Port-Physician by Governor Hartranft.

Dr. Hoffman's social qualities, his uniform courtesy, his unremitting attention to his duties, and his unimpeachable integrity, peculiarly fitted him to fill positions of public trust, while his fidelity to the honor of the high calling which he had chosen won for him the universal regard and esteem of his professional brethren.

THE first conversational meeting of the Philadelphia County Medical Society for the season will be held at 8 P.M. on the evening of October 14. A large attendance is requested, as the subject of the Society's publications is to be decided.

SATURDAY, OCTOBER 17, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE DIAGNOSIS OF THE DISEASES OF WOMEN.

BY F. H. GETCHELL, M.D.,

Clinical Lecturer on the Diseases of Women in the Jefferson Medical College.

GENTLEMEN,—When Demosthenes was asked what was the first part of oratory, he answered, delivery; and the second—delivery; and the third—delivery; and I think we may safely say that the first object to be obtained by the study of gynæcology is diagnosis; and the second, diagnosis; and the third, diagnosis. To be sure, we are not to stop here; but after a correct diagnosis has been made the case is plain, and without it there will be no success either in prognosis or treatment. The diagnosis of uterine disease is not or ought not to be very difficult, and still one who devotes much time and attention to the study of the diseases of females is constantly meeting with cases where an incorrect diagnosis or no diagnosis at all has been made.

Now, why is this? The modes of examination are numerous, and the directions how to proceed are plainly given in the text-books. The reason is not that the means of diagnosis have failed to clear away the obscurities of the case, but that the practitioner has failed to make use of them, and after the most superficial examination, from which he has no right to expect to learn anything, he concludes either that he knows all about it, or that he doesn't know anything about it, as the case may be; and the result, so far as the recovery of the patient is concerned, is the same either way. My experience coincides with that of Dr. Thomas, who says, "I have been struck by the fact that the source of difficulty is almost always the same. The failure of diagnosis has not been due to their having incorrect conclusions from diagnostic means, but to their not having brought these means fully into action, and properly applied them to the solution of the case in hand." If we are to obtain information that will be of any value to us in the treatment of these cases, our examination must be systematic and thorough. It is time that the asking a few irrelevant questions, the hurried introduction of a speculum, and the whitening the os with nitrate of silver, were done away with. The art of observing, which has been called the alphabet of diagnosis, while it is within the reach of those resolved on its attainment, and is sure to be acquired by those who systematically and patiently cultivate the habit of close observation, is by no means so easy to acquire as you may suppose. You must remember that it is not the amount of disease that passes under the physician's observation that gives him knowledge; one man will learn more from one case than another will from a hundred, by close observation. I mean that love of investigation that

allows nothing, however insignificant, to escape it; the minutest details are observed and recorded; and here let me say to you that perhaps there is nothing that retards the advancement of young physicians more than contempt for minutiae. They are so apt to forget that those who achieve the grandest results are the men who allow nothing to escape their notice. It is told of Wellington that on the publication of his "Dispatches," one of his friends said to him, on reading the records of his Indian campaigns, "It seems to me, duke, that your chief business in India was to procure rice and bullocks." "And so it was," replied Wellington; "for if I had rice and bullocks I had men; and if I had men I knew I could beat the enemy."

You have observed at this clinic that we make it a rule to allow the patient to tell her own story without interruption; and though it is sometimes tedious, and we are obliged to listen to much that has no bearing upon the case, still there is among the chaff now and then a grain of wheat that can be found in no other way, and without which the history of the case would be incomplete.

The patient having concluded her account of her illness, it is now our turn to ask such questions as we think requisite.

Time and practice are required to acquire skill in the cross-examination of patients; and when you remember how our friends the lawyers are obliged to practise the cross-questioning of witnesses before they become skilful examiners, you will not give up trying to improve, or be discouraged at your early failures. It is not often that the patient intentionally misleads the physician, but she may be embarrassed and confused, or, from extreme modesty, only half answer the questions; there is a *suppressio veri*, although there is no *allegatio falsi*; but by relieving her embarrassment by looking away from, instead of at, her, and so wording the inquiry that she shall understand your meaning and at the same time see that you are regarding her feelings, you will gain her confidence, and learn all that is requisite in regard to her ailment. It is important that you follow some regular system in your examinations of the patient. You may adopt whatever method you please, only so you have a method,—a place to begin, and know when you have gone over the whole ground. You have noticed that I divide the examination into functional, constitutional, and local: under the first head I inquire as to the frequency and character of the menstruation, number of pregnancies and abortions, and character of her labors; under the second, with regard to the sympathetic disturbances so commonly associated with disease of the womb, the condition of the digestive function; whether she has headache, palpitation of the heart, and in regard to the condition of all the organs remote from the uterus; and under the third, the locality and character of the pains in the pelvic region, the condition of the bladder, amount and character of vaginal discharge, if any. Having learned all you can by questioning your patient, you are now ready to make a physical examination. We will suppose, then, that the patient has been placed upon a firm

unyielding surface before a good light, that she is covered with a large sheet, her lower limbs flexed, and the knees allowed to fall well apart. You are now ready to do—what? introduce the speculum? No. That is what is too often done, and is just what you are not to do if you ever expect to become skilful in the diagnosis of uterine disease. It is not as a diagnostic but as a therapeutic instrument that you will find the speculum of the most service to you; but you have a diagnostic instrument, if I may use the term, in the index-finger of your right hand, worth more than any speculum that was ever invented. What I particularly desire to impress upon you is that at this stage of the examination there is nothing to be done with the speculum, and to call your attention to the importance of the much-neglected finger. After you have concluded the digital examination you may introduce the speculum, and look through it to verify the diagnosis you have made with the finger, so far as it relates to the os uteri; but not until a thorough digital examination has been made is the speculum to be thought of. Why, in fact, you don't even know what direction to give the instrument till you have ascertained the locality of the os with the finger; and then again you may do irreparable mischief. The worst case of hemorrhage from cancer of the womb I ever saw was caused by the introduction and expansion of the blades of a bivalve speculum, when a digital examination would have convinced the operator that it should not have been used. I dwell upon this point, gentlemen, even at the risk of being tedious, for I know from long experience that too much reliance is placed upon the speculum as an aid to diagnosis, and that a thorough examination with the finger is too often neglected. On the ticket issued by the late Prof. Mott, of New York, to the students attending his lectures on surgery, there was a hand with the index-finger extended, and in the end of that finger there was an eye; the meaning of which was that the student should so educate his finger that when occasion required him to pass it beneath the skin, he could see with it all that was there; and I am sure that in the diagnosis of the sexual diseases of females you will find nothing more important than the education and use of the finger, and by education I mean what I say. To be sure, it will take time for you to become skilful; but what do you think of the professional pianist who begins his studies with the understanding that he must practise four hours a day for eight or ten years before he can acquire that delicacy of touch that will rank him with first-class performers? and, as an evidence of the extent to which the finger may be educated, we have seen the blind able to detect and map out the colors of a dress by the sense of feeling alone.

It may be that some of you think I overestimate the value of the finger in the diagnosis of uterine disease. Let us go on with our examination, and see what we can learn by its use. First, we will wash our hands, for we should always before touching the sensitive mucous membrane of any patient be sure that the hands are free from impurity; then we will smear with lard or oil the first two fingers, for you can reach about an inch higher with the

first and second than you can with the index-finger alone, and you will want to use both if you are not able to thoroughly explore the parts with one. We will take a seat before the patient, for considerable time may be occupied, and standing is tiresome. The vaginal canal being pervious, and the finger meeting with no obstructions, the first thing to be determined is the location of the os. Is it in the normal position of a healthy uterus, or is it low in the pelvic cavity, as in prolapsus or elongation of the neck? or high up, as when lifted by pregnancy or morbid growths? Is it tipped forward behind the pubis, as in retroversion of the fundus, or is it back by the sacrum, as in anteversion? Is the cervix larger than normal, as in congestion and inflammation? Is it hard, or is it soft? Is it hot and tender? and does it bleed on the slightest touch? Is the os well closed, or is it patulous? and is there exuding a thick gelatinous secretion? and is there present that soft velvety ring of granulation never to be mistaken by the educated finger, and never recognized by the careless examiner? Is the uterus movable in the pelvis, or is it fixed by cellulitis, the result of cancerous infiltration? and is there present the hard, unyielding border with the crumbly surface, and a tendency to bleed whenever touched? or do we find smooth hard lobes or knobs dotted over the end of the cervix, as in the early stage of cancer? and if so, we must be particular to examine whether the fissures between the elevations are all traceable to the os, for if that is the case, they are probably the result of laceration, and the irregularities are not the result of cancerous deposit. Then, passing the finger up behind the neck of the uterus, the os being in the normal position, do we find a lump there, due either to retroflexion, fibrous tumor, or impacted rectum? and in front is there one due to antelexion, fibrous tumor, or stone in the bladder? Is the condition of the vagina normal? and is there anything to be discovered by pressure of the pelvic areolar tissue in all directions through the wall of the vagina? if not, then we may place the left hand on the abdomen, just above the pubis, and, by bimanual palpation, proceed to examine that part of the uterus out of reach of the finger, within the vagina. I have often been told by students that they found this conjoined manipulation unsatisfactory, and were unable to engage the uterus between the two hands. I am of the opinion that the cause of their failure has been that they endeavored to press the hand on the abdomen down to the uterus, when they should have lifted the uterus up to it with the other hand. With two fingers in the vagina, passed as far as possible up behind the neck of the uterus, you can lift it upwards and forwards, so that in all except very fat women the fundus can be readily felt with the hand on the abdomen, and the entire surface be examined. The posterior wall of the uterus may be examined by introducing the finger high up within the rectum, and at the same time drawing the uterus down with a tenaculum hooked into the posterior lip of the os. We must not expect the uterus to descend at once, but by steady traction we shall cause the supports to relax,

and shall be able to bring it down as far as is requisite. We can examine the recto-vaginal space by introducing the finger into the rectum and the thumb into the vagina. It is often necessary to examine the bladder, and this is by no means a difficult operation. The female urethra is so short and dilatable that I am in the habit constantly of introducing my finger within the bladder for purposes of exploration, and I am somewhat surprised that the condition of the bladder is so seldom investigated in this way by gynecologists when there are so many cases in which it is out of order, and an examination with the finger so often clears up the diagnosis. The patient being etherized, it is only necessary to use the forceps or the uterine dilator to dilate the urethra enough to admit the end of the little finger, which, having first oiled, you introduce, and by rotating and pushing it gently forward for a few moments, it will pass through. Now withdraw it and introduce the tip of the index-finger in the same way until it passes into the bladder. There is, of course, some pain after the patient comes from under the influence of the ether, but this is remedied by an opiate; and the incontinence of urine is soon gone. I have never seen any bad results from the introduction of the finger within the bladder, and I have done it many times. There is not time in one lecture to even allude to all the obscure sexual difficulties that may be cleared up by a digital examination; but if in this hasty review of some of them I have convinced you of its importance as an aid in diagnosis, and you will improve your opportunities in the education and use of it, I shall be satisfied and you will be benefited. If we fail to discover the difficulty by a digital examination and with the use of the speculum, we must then explore the cavity of the uterus; and to aid us in this manipulation we have the uterine sound or probe. The one I prefer, and that I have shown you, is of small size, is made of copper, and is perfectly smooth. There are no marks to indicate the inches, and there is no knob two and a half inches from the end; these are of no use, and if you bend the instrument much, as you will be obliged to, you will find that it will be constantly breaking off at these indentations. When you wish to measure the depth of the uterine cavity, introduce the sound, carry the forceps up to the os and then withdraw the two together. Now, this sound is a very reliable diagnostic instrument, if used in a careful and thoughtful manner; and it is of no use, and is capable of doing great harm, if used carelessly. I should be sorry to have you think the introduction of and the exploration of the uterine cavity with the uterine sound an operation requiring no skill: on the contrary, it often taxes the patience of the most adroit; and I have seen most unfortunate results from its use by the inexperienced. A careful digital examination should always precede the use of the sound, for by it we learn the position of the uterus, and whether we have version or flexion to deal with; and then, and not till then, do we know how to shape the sound or what direction to give it. The instrument should always be oiled, and we may use the specu-

lum or not, but I think you will find the operation much less difficult if you use the bivalve speculum than if you proceed without it. Sometimes the sound passes to the fundus of the uterus without any difficulty, but in many cases after you have passed it something more than an inch up the cervical canal, it meets with an obstruction, and the desire to use force to overcome the difficulty is almost irresistible; but this must not be done. If the sound does not go in, *the point of the instrument is not directed in the axis of the canal*, and you must withdraw it, and give it a different curve. If after repeated efforts you fail to introduce it, you will often succeed if you take the tenaculum and draw down the lower end of the uterus and hold it there while you pass the sound. In this way you straighten the canal, and the difficulty is removed. You will do well to remember what I have said about the sound, for I have been told by very many young physicians that they found difficulty in the use of it; and, as I have said before, cases are not uncommon where injury has been done with it. It is only a short time since I was called to the assistance of a young physician who, failing to recognize the case as one of ante flexion, had pushed the sound directly through the posterior wall of the uterus, and it was only arrested by coming in contact with the sacrum; fortunately, the patient recovered. The examination with the sound gives us information in regard to the depth and direction of the uterine cavity, and also as to the sensitiveness of the mucous membrane, but there are cases in which, both for diagnosis and treatment, it becomes necessary to dilate the canal sufficiently to admit the finger. There are several ways of accomplishing this. The parts may be rapidly dilated with the uterine dilator sufficiently to admit the finger far enough to complete the dilatation, or you may adopt the slower method of dilating with tents of sponge or sea-tangle. To introduce a sponge-tent, hook a tenaculum into the posterior lip of the os, and draw the cervix well down into the speculum, seize the tent with a strong forceps, dip it in oil, and by rotating it at the same time you push it forward, you will be able in most cases to introduce a tent large enough to complete the dilatation, and thereby avoid the necessity for the introduction of the second tent, for it is not a matter of indifference whether you use one tent or more. The reason is that on the removal of the first tent the mucous membrane is seen to be more or less abraded, and in the most favorable condition to absorb putrid discharges retained in contact by subsequent tents. Unfortunate results are so frequent from this cause that I invariably use one tent only, and if further dilatation be required use the finger or the uterine dilator.

TREATMENT OF VENEREAL WARTS AND CONDYLOMATA (*The Canada Medical Record*, July, 1874).—Wm. Bury recently cured two cases of venereal warts which had obstinately resisted treatment by strong nitric acid, sulphate of copper, and the scissors, by applying the acid nitrate of mercury followed by poultices of linseed meal. Two applications sufficed to make a perfect cure.

ORIGINAL COMMUNICATIONS.

A CASE OF MOVABLE EXUDATION IN THE TYMPANIC CAVITY, ATTENDED WITH VARIABLE HEARING.

BY CHARLES H. BURNETT, M.D.,

Aural Surgeon to the Presbyterian Hospital in Philadelphia, and Surgeon-in-charge of the Infirmary for Diseases of the Ear.

THE case about to be related is interesting from the fact that the diagnosis was greatly aided by the subjective symptoms.

Jacob Y., age 55, a large, strong man, a furnace-maker, applied for relief from deafness in the left ear, at the Infirmary for Diseases of the Ear, in June of this year. The patient stated that his right ear was greatly diseased when he was eight years old, and "that a polypus was taken from it, and the ear was then burnt with blue-stone." Since then he has had no hearing in that ear, and inspection reveals total occlusion of the auditory meatus by a diaphragm covered with skin. The skin, forming, as it were, the false or new fundus of the auditory meatus, is not very sensitive, and a paracentesis-needle may be pushed through it several millimetres until the instrument strikes bony tissue. The patient, a very intelligent man, states that when Politzer's or Valsalva's method of inflation is used he feels the air enter each middle ear alike. In this instance, however, he sought relief for an increasing deafness of recent origin in the left,—the heretofore good ear. He could assign no reason for its onset or persistence, as there had been no attack of pain nor any extraordinary event from which to date its occurrence. The drum-membrane presented nothing positively abnormal in its appearance, and as the right drum-membrane was wanting, the relative appearances of the good ear were of no value. The tuning-fork placed on the vertex was heard better in the right—the occluded ear—than in the left ear. External sounds—*i.e.*, sounds conveyed through the air—could not be heard at all in the right ear. The watch was heard $\frac{6 \text{ in.}}{40 \text{ ft.}}$ in the left ear, and the voice about three feet.

Catheterization of the left Eustachian tube forced air into the tympanic cavity, with moist râles, and was followed by considerable improvement in hearing, amounting to $\frac{12 \text{ in.}}{40 \text{ ft.}}$ for the watch, and six feet for the voice. The improvement in hearing persisted for two or three days, and then disappeared, the hearing sinking to six inches for the watch, below which it never fell. This treatment with the catheter was pursued for several weeks, with invariably the same results. There were no signs of faucial or nasal catarrh, and the membrana tympani remained unaltered in appearance. The patient at last stated that he had constantly felt a "drop (of fluid) in his ear," and that when he lay down at night he could hear as well as ever, but when he arose in the morning "the drop came back in his ear and he was deaf." After the narration of these subjective phenomena, the patient was placed in a chair, and told to bend his head alternately backward and forward, and upon doing so his hearing was found to *vary with the positions assumed*. He stated that as he moved his head he would "feel the drop move," and I discovered that he really could hear the watch twice as well in some positions as in others. This variable hearing was at its maximum when the head was thrown backward,—*i.e.*, when the position of the head most closely resembled that assumed when the patient was in a supine position in bed, and the hearing was at a minimum when the head was erect or thrown a little forward,—*i.e.*, in about the position the patient usually carried his head in the pursuit of his daily avocation.

From this examination, together with the statement of the subjective symptoms, I felt convinced that there was a collection of movable fluid within the tympanum, which caused this deafness, and that a paracentesis of the membrana tympani would relieve it. I then made a free incision in the postero-inferior quadrant of the membrana tympani, and a gentle inflation of the tympanum by Valsalva's method forced a large drop of light-yellow serum into the external auditory meatus. The patient instantly expressed great relief, saying that the "drop had gone, and that he could hear distinctly." I then found that the hearing had risen to $\frac{15 \text{ in.}}{40 \text{ ft.}}$ for the watch, and the voice was heard normally.

The patient was instructed to inflate the tympanum by the method of Valsalva several times during the day, in order to thoroughly empty the tympanic cavity of all fluid. This course was pursued for forty-eight hours, at the expiration of which the perforation healed, and the *hearing remained normal*.

Remarks.—The presence and recognition of movable exudations in the tympanum have been fully described by Politzer several years ago (*Wiener Med. Wochenschr.*, 1867, and *Wiener Med. Presse*, 1869). The symptoms produced by their presence are deafness, altered appearance of the membrana tympani, and, if the membrana tympani is thin, visibility of the fluid contained in the tympanum. In such cases the level of the fluid appears as a dark line on the membrane, but, after catheterization, bubbles of air may take the place of the previously undisturbed fluid.

Cases similar to the one under consideration are thus accounted for by Politzer, *loc. cit.*, 1869, p. 2: "Closure of the Eustachian tube causes a rarefaction of the air in the tympanum. The diminished pressure thus produced upon the vessels of the tympanum, already distended by hyperæmia, permits a ready escape of serous fluid through the walls of the vessels."

In the case just described, deafness more or less relieved by the catheterization of the Eustachian tube, the subjective symptom already described as "the drop," and the variable hearing as revealed by the watch, were the prominent symptoms.

The appearances of the membrana tympani were unaltered excepting a slight retraction, and the fluid contents of the tympanum were, of course, invisible through the drum-membrane.

The deafness in this instance was caused by the impeding influence of the fluid in the tympanic cavity upon the ossicula auditus and the fenestræ of the labyrinth. The temporary relief afforded to the hearing by the catheter was due to the unloading of the chain of bones and the fenestræ, and the resumption of their vibratable functions. "The drop" was the perception by the patient of the motions of the fluid contained in the tympanic cavity, and the variable hearing produced by the positions of the head of the patient was caused by a partial unloading of the conducting apparatus of the ear, as the fluid gravitated under various attitudes assumed by the patient, into portions of the tympanum remote from the ossicles and the fenestræ.

In conclusion, I would draw attention to a phenomenon observed in this case, and in other

cases, of fluid accumulation behind the drum-membrane.

At the moment the knife touched the membrana tympani I failed to perceive the peculiar sound as well as the sensation communicated through the instrument as it touches a tightly-stretched and isolated membrane. This is due to the fact that the membrana tympani was so much encroached upon by the fluid contained in the tympanum that it no longer acted as an isolated membrane. I would therefore add this peculiar doughy or inelastic feeling in the membrana tympani to the diagnostic signs of an accumulation of fluid behind the membrane, and I consider it one of especial benefit in a case like this, where there were none of the peculiar ocular manifestations which usually characterize this condition of the ear.

This fact might be utilized before the operation by gently percussing the membrana tympani with a delicate blunt probe, which would elicit the peculiar acoustic effect of an isolated membrane if the membrana tympani were unimpeded; or if the membrana tympani had ceased to act as an isolated membrane, the proposed percussion would reveal the fact by the doughy sensation or dull sound produced by the properly manipulated probe.

127 SOUTH EIGHTEENTH STREET.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF DR. F. E. GARRETSON.

DIAGNOSIS OF A TUMOR.

GENTLEMEN,—I have taken occasion very frequently to say to you that to diagnose the character of a tumor for purposes of treatment does not seem at all a difficult matter, for the reason that there are, clinically speaking, but two kinds of tumors, and any morbid enlargement with which we meet will be found to belong to the one or other of these classes.

A tumor has in itself the explanation of its existence; or otherwise it is without such self-explanation. A tumor belonging to the first class contains its own history, and suggests of itself the character of treatment demanded. A tumor belonging to the second class tells nothing, and leaves us to our own inferences.

Tumors of the first class are, in themselves, necessarily benign.

Tumors of the second class are found almost certainly to prove cancerous.*

Benign tumors are of multitudinous signification. Examples: ranula, hernia, wens, etc.

Cancerous tumors, however they may differ in expression, are of a common meaning. There is but one cancer, and we may agree with the English school of pathology in viewing it as a disease of constitutional signification, and not with Virchow, Woodward, and their adherents, who esteem it as being primarily of local origin.

The self-explaining tumors demand for their recognition the possession of anatomical and physiological knowledge sufficient for the reading of their riddles. For example, he who discovers in a tumor of the groin an undescended testicle must know of the meaning of

the inguinal canal; he who diagnoses a sebaceous cyst is to read the perversion in a knowledge of the oil-secreting glands; he who recognizes a ranula must have understanding of the salivary outlets. Knowing of all the associations of a part in which a tumor appears, he is to find the meaning of the tumor—if it has local meaning—in the *something* which is seen to be wrong.

Let us suppose, however, that we meet with a tumor in a part,—in any part,—and that we find ourselves unable to explain its presence in any derangement of the part. What is to be the conclusion? We are to infer either that we are ignorant concerning the relations, or else, being satisfied that we know properly and fully the locality, that the tumor is not one of local, but of systemic meaning. It would be for us, then, if satisfied of the latter conclusion, to consider tumors of constitutional expression. And here, through exclusion, we would very quickly be able to determine whether or not we had to deal with scrofulosis, the venereal disease, or with *that something* of which we know so little,—the cancer-vice.

As an example of each manner in diagnosis, I now bring before you five patients, every one of whom has a tumor occupying the same locality, and all being of a common appearance.

[The cut is taken from a photograph of one of the five, who died, a few months subsequently, from cancer.—Case V.]

Case I.—The history of this case exhibits it as one of acute signification. The trouble commenced, as the patient tells us, in an aching tooth. Opening the mouth, we remark at once a lower molar evidently raised in its socket, and about which there is much inflammation. This, as the *something wrong*, we see, and we see nothing else in the way of a cause. Without enlarging on the subject, I may say that, let the tumor prove what it will, the most sensible thing to be done is either to remove the tooth we find diseased, or otherwise treat it. This we are to do because we know the tumor to be an enlargement of the submaxillary gland, and, finding no other cause for such enlargement than the one just discovered, we may not possibly do anything better than so direct our treatment. This tumor, I hold, explains itself as a sympathetic enlargement of the salivary gland. The cure of the enlargement will be found in the cure of that which irritates the region. We will extract the tooth.

Case II.—Here we have a second tumor in the submaxillary region; differing, however, from the first, in being less circumscribed. The history of this case expresses it also as of acute signification, although it certainly would not be necessary to learn this of the patient, remarking the characteristic features of all the expressions. The parts are very red and very hot; they may only be very painful.

Attempting to open the mouth of this patient, we discover that she has a broken lower jaw,—and this accident has resulted from the stroke of a brick. We will cure this tumor by curing the broken bone,—by putting the parts in a splint and thus securing rest, and by employing such local antiphlogistic means as may prove to be required. Certainly this tumor explains itself.

Case III.—In an examination of this case, I expose to you caries of the jaw; and if for a single moment you glance at the decaying and otherwise diseased



* A single exception to the placing of tumors into two classes exists in the case of hydatid growths.

mass of overlying teeth, you will be at no loss to account for the trouble of the bone. This is another instance in which the tumor originates in sympathy with a local disturbance, and explains itself. Our treatment here will be, first, to remove the teeth; second, to scrape away the dead and dying portion of the maxilla. The cure of the caries will prove the cure of the morbid enlargement. Or, having operated on the bone, we will, not unlikely, find advantage in applying to the face of the tumor a mixture of equal parts of tincture of iodine and olive oil. Alluding to this combination, I might direct your attention, in passing, to its efficacy in all cases of subacute or chronic inflammations; I have come to depend on it as a kind of specific.

Case IV.—The tumor we here find secondary to necrosis of the jaw, and the necrosis has its origin in conditions of strictly local signification. Any one of you can here explain the cause of the enlargement, and judge as to what is to be done to effect a cure. We must wait for a complete exfoliation of the sequestrum, and then remove it. The tumor will take care of itself.

Case V.—Here is a fifth tumor, having a common appearance with the others; palpation, however, discovers a difference. This tumor seems to the touch to be more or less lobulated; it is also very hard. It is without pain on pressure, but has occasional sharp, sting-like sensations running through it.

Not unnecessarily to detain you, I would say that before bringing this patient into the room, I made a thorough examination of the case with a view to finding a cause for the tumor, but the search resulted in nothing: that is to say, this young man has no bad teeth; no lesion from accident; no caries; no necrosis; no local anything that explains his condition. In a search continued in the constitutional direction, I have succeeded no better. There is no scrofulosis; no tuberculosis; no venereal disease; no anything familiar to us, that directs how to act in the case. Now, because the tumor is independent of common causes of irritation, I know of no better practice than to view it as an expression of cancer, and so direct our practice. In other words, let the enlargement alone, and wait developments; for if it should prove that the disease is cancer, having no specific for such a vice, we find ourselves powerless; certainly the knife could not be used on the tumor before us, as it is without distinctness of boundary, and to meddle with true cancer so situated with sorbefacient and other preparations is to do nothing but harm. If, on the contrary, this tumor should not prove to be cancerous, we certainly act with greatest show of wisdom in doing nothing until we find out what is to be done—*secundum artem*.

I take it upon my experience, however, to say that in three months I will exhibit this particular case again before you, in the condition of fungus hæmatodes. I take it upon myself to declare the tumor cancerous, on the simple ground that it declares itself to be nothing different.

UNIVERSITY HOSPITAL.

SURGICAL CLINIC OF PROF. AGNEW, SEPT. 16, 1874.

TWO CASES OF HYDROCELE.

TWO cases of hydrocele were presented,—one in a boy 2½ years of age, the other in a man of 30 years. In both, the complaint had existed for several months; occupying in the child the right side, and in the adult the left side of the scrotum. Prof. Agnew said that the tumor for which hydrocele in a child is most liable to be mistaken is hernia, but there are several points of difference which render the diagnosis not difficult. If we study the characteristics of a hydrocele

we find it to be an oval or pyriform tumor, uniform in outline, translucent by transmitted light, permanent, and giving to the touch a characteristic elastic feel. Hernia is apt to be more or less irregular in outline, but may present very much the shape of a hydrocele; it is not translucent, though the hernial sac may contain sufficient serous fluid to render a portion of the tumor pervious to light. It is not a constant tumor, but, unless strangulated (in which case there are symptoms which give unmistakable evidence of the condition) disappears when the patient assumes a recumbent posture, or may be easily reduced by proper manipulation. The fingers placed upon a hernial tumor feel an impulse from the acts of coughing, crying, etc. Besides, a hernia first appears at the abdominal ring, or in the canal, and grows downward, while in hydrocele of the tunica vaginalis testis the swelling begins below and extends upwards. In the adult there are other tumors from which we are obliged to diagnose hydrocele: enlarged testicle, tubercular, cystic, and cancerous diseases of the gland. One characteristic of all these is their increased weight as compared with hydrocele; another is the entire absence of translucency. The very rapid growth of malignant sarcocele is an important diagnostic sign. The treatment of hydrocele is of two kinds: palliative and curative. The former consists in evacuating the tumor by puncture with trocar and canula; the curative treatment varies with the age of the patient. In children of the age of the youngest of these patients, or younger, the fluid will sometimes be absorbed under the influence of external applications of a solution of muriate of ammonia or of tincture of iodine; but a more satisfactory method is the introduction of a thread through the walls of the sac. In the adult the most satisfactory method is the puncture of the sac, evacuation of its contents, and the injection of tincture of iodine. The first patient was etherized, and a silk thread introduced through the walls of the tumor, the ends being tied loosely together; the contents of the sac were then allowed to escape. Prof. Agnew directed that the thread be removed in twenty-four hours, by which time sufficient irritation would be excited to effect a cure. The other case was first tapped, and the fluid drawn off in the usual manner. A little more than fʒij of tincture of iodine was then injected, and allowed to remain.

Prof. Agnew said that it was essential to a favorable result to retain the iodine in the cavity of the sac, and its withdrawal by some operators he considered the cause of failure with them in the use of this agent; that he believed if the operation be performed as directed, and a sufficient quantity injected (fʒij to fʒijss), a cure would be effected in all cases unless the hydrocele be of extraordinary size. The patient was directed to return immediately to his home and go to bed. The lecturer said that active inflammatory symptoms would soon manifest themselves, and the part would swell greatly, and require careful support. Five or six days after the operation the patient may usually be allowed to rise from bed, being careful to continue the support of the scrotum by a suspensory bandage. Should the inflammation excited by the operation be too violent,—a very rare occurrence,—local applications of lead-water and laudanum may be required. In the course of a few weeks the swelling will have completely subsided and a cure be effected. Prof. Agnew spoke of the necessity of a careful examination after drawing off the fluid of hydrocele, to ascertain that it be not complicated by hernia or organic disease of the testicle, which last condition contra-indicates the use of iodine injections.

COLLE'S FRACTURE OF RADIUS.

The next patient was a woman 37 years of age, with a fracture of the lower end of the left radius of the kind

usually known as Colle's fracture. This was the result of a fall upon the extended hand, occurring four days ago. Prof. Agnew described the three kinds of fracture of the lower end of the radius, to which the names of Barton, Colle, and Smith are given respectively. The first is a rare form, and only includes fractures extending into the wrist-joint. Barton described two forms of this fracture: one in which the fracture extended from the palmar to the dorsal surface of the bone, and obliquely from without downward and inwards, separating the styloid process of the radius; the other extending from the outer to the inner side, and from the dorsal surface obliquely downwards into the joint, detaching the dorsal border of the articulating extremity.

The name of Colle's fracture is given to any fracture of the radius below a point two and a half inches from its extremity, which does not enter the joint. Smith's fracture occurs at a distance of at least two and a half inches from the end of the radius. The treatment of all these different forms is essentially the same, being directed to the reduction of a deformity which consists in the displacement of the lower fragment and hand backward and to the radial side. This deformity is more marked usually in those fractures occurring very near the extremity of the bone; particularly if the fracture be oblique and complicated by dislocation of the lower end of the ulna, in which case the styloid process of this bone projects conspicuously.

Prof. Agnew said he considered the best method of treating these fractures was by Bond's splint, the shape of which abducts the hand strongly to the ulnar side. The hand grasping the block at the extremity of the splint admits of motion of the fingers, which Prof. A. considers of great importance in preserving the usefulness of the hand. At the same time the antero-posterior deformity is corrected by the use of wedge-shaped pads, one of which is placed upon the dorsal surface over the lower fragment with the base upward, the other on the palmar surface with the base corresponding with the line of fracture looking downward. This had been the treatment in this case, and was continued.

The lecturer called attention to a discoloration highly characteristic of fracture, which is due to hemorrhage from the fractured surfaces, and which does not make its appearance externally for several days after receipt of injury. This is to be distinguished from discoloration due to rupture of more superficial vessels.

TRANSLATIONS.

TRAUMATIC NEURALGIA.—At the recent meeting of the French Association for the Advancement of Science, reported in the *Gazette Hebdomadaire*, September 11, M. Verneuil called attention to a complication of traumatic lesions which, without being very grave, is yet painful, and capable of retarding the work of reparation. It consists in painful sensations, more or less acutely perceived in the wounded locality, in its neighborhood, or even at a considerable distance, supervening during the first few days subsequent to the accident.

These sensations affect a neuralgic character and intermittent type, are not to be explained by ordinary causes of traumatic suffering, resist the ordinary anti-phlogistics and narcotics, and yield without difficulty to sulphate of quinine.

M. Verneuil gives this complication the name of *traumatic secondary precocious neuralgia*. Pain is essentially the predominant symptom; its onset is generally sudden, and, once established, it may be continuous or

remittent, or more frequently intermittent, with daily attacks.

Concurrently, contractions or a certain degree of powerlessness of the muscles may be observed. This condition is generally limited to the parts near the wound. Vascular troubles may also exist, strictly due, to all appearance, to the existence of the local pains, and these may even provoke secondary hemorrhages. The wound passes through various modifications. Sometimes it preserves its normal appearance; sometimes it presents a diphtheroid aspect; sometimes even it may become the seat of a true phlegmonous inflammation. These various conditions are only effects of the neuralgia, since they yield very rapidly to sulphate of quinine.

What is the cause of this neuralgia? Is it neuritis, modification of the nervous conductors, etc.? The details of various observations, says M. Verneuil, do not point to the possibility of a pathological cause of this kind; but if the explanation of this neuralgia is not found in traumatism, its seat or its varieties, it may be recognized as having an intimate relation to anterior diathetic conditions or to the previous health of the individual.

These various facts permit the establishment of a diagnosis without difficulty, and allow also of the opportune application of the treatment, which is administration of quinine in proper doses, at regular intervals, and for a sufficient time.

A. V. H.

LIGATION OF THE INTEROSSEOUS ARTERIES OF THE FORE-ARM (*Acad. de Méd.*, September 15).—M. Gosselin read for the author, Prof. Michel, of Nancy, the following communication: In a patient who had received a gunshot wound, producing fracture of the superior extremity of the radius, such profuse hemorrhage supervened that M. Michel was obliged to ligate successively the brachial, in the lower fourth, the radial, the ulnar arteries, in the upper third, and, finally, the trunk of the interosseous. It was not until after the ligation of the latter, now performed for the first time, and heretofore avoided by operators on account of its difficulties, that the hemorrhage was completely arrested.

The following was the operative procedure adopted by M. Michel:

The direction of the muscular interstice of the anterior ulnar and of the flexor sublimis digitorum was traced, and a line drawn from the internal side of the pisiform bone to the epitrochlea as if for the ligation of the ulnar in its superior third.

On this line a cutaneous incision was made three inches at least in length, of which the centre corresponded to the bicipital tuberosity of the radius. The muscular interstice was then divided almost to its superior extremity. Then, flexing the wrist on the fore-arm and the fingers on the hand so as to entirely separate and divide the superficial from the deep flexor above, the origin of the ulnar could be perceived.

Following its posterior aspect, the origin of the trunk of the interosseous could be plainly perceived, enveloped by its accompanying veins. These surroundings rendered the isolation of the vessel a somewhat delicate matter, but one which was surmounted by the exercise of patience. This process by practice becomes easy, and in a short time may become familiar even to students.

The author terminates by the following conclusions:

1. The trunk of the interosseous may become the origin of severe traumatic hemorrhages of the fore-arm and hand.

2. There is every reason, therefore, why the ligation of this artery should be among the procedures of operative surgery.—*Gaz. Méd. de Paris*, September 19, 1874.

A. V. H.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, OCTOBER 17, 1874.

EDITORIAL.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

FOR reasons which have been adduced in previous editorials of this journal, it is a matter of grave doubt whether the American Medical Association ever can assume a paramount importance to the profession at large, or ever approximate in this country to the influence wielded by the British Medical Association in Great Britain. These reasons, however, do not apply to the State Medical Societies. Citizens of one commonwealth,—governed, therefore, by the one law and domineered by the same customs,—inhabitants of a territorial district not too large to forbid free intercourse, the members of a State society are in a position to be readily fused into that unity which can alone give strength to a medical association. Believing, as we are inclined to, that the hope of the profession for the future, nay, rather, the very existence of the profession as a profession, lies in the State societies, it is with the greatest of interest that we have examined the Transactions before us. The result is eminently satisfactory. In the brief space of an editorial we can only comment upon a few points which have especially attracted our attention, and must omit notice of much that is worthy of praise. An objection to the eloquent address of the President may be made by some that it is too theological; but since

it has become the fashion for scientists to prolong their vision across the invisible, and mistake for wisdom their own illogical reasonings, it is well, occasionally, to hear a little orthodoxy.

The address on obstetrics is a very elaborate, well-written résumé of recent literature, and must be of especially great value to those who have not access to the libraries of large cities. The address on surgery is really an article on tracheotomy, and we leave the judgment of its value to our surgical friends.

The *pièce de résistance* of the volume is a very learned, laborious article on croup in its relations to tracheotomy, by Dr. Cohen, of this city. It is a paper that should be studied by every man who expects to attempt such operation or to decide as to the propriety of its performance.

The reports of the county medical societies are all of them interesting; containing, it is true, many matters concerning local epidemics as well as medical geology and geography scarcely of general interest, but containing also reports of strange and instructive cases, many good suggestions in therapeutics, and other matters worthy of general attention. We confess that we have been somewhat surprised at the literary ability displayed in most of them, and sincerely wish some of our city contributors would take lessons in English of their authors. We would especially cite, as suggestive, Dr. Corson's remarks on the treatment of pneumonia, and, as remarkable, a case reported by Dr. Randenbush, in which the patient recovered although he had been run through the chest with a scythe, which he had pulled out with his own hands. "The curvature of the scythe cut from the point of entrance obliquely downwards and to the right, severing the cartilage of the third rib on the left side, the sternum and cartilage of the fourth rib on the right side, making a wound in the chest anteriorly six inches in length. The posterior or wound of exit was about two inches long, or the width of the scythe."

Dr. P. R. Palm, of Allentown, states that the root of the *Asarum Canadense* is used in his neighborhood for the production of abortion, and details a case. We had supposed our "wild ginger" was as harmless as peppermint, but certainly the evidence brought forward is remarkable and staggering.

During the year the Society has lost by death the member by whose act it was called into being. It was Dr. Wilmer Worthington who offered, at a meeting of the Chester County Medical Society, in 1847, the preamble and resolutions which led to the organization of the State Society, and to him, there-

fore, the profession of the State owes a debt of gratitude, enhanced by a singularly useful and unselfish public life of many years.

Dr. Worthington was an enthusiastic advocate of everything calculated to elevate the general tone of the profession; doing all that lay in his power by word and by deed. As he has laid the foundations, so we hope others will build; organizing and consolidating the State Society until it becomes a body whose word is paramount in its district, and until it is able to use its influence with success in enforcing upon candidates for professional honors that higher general culture, and more extended and thorough technical education, for which Dr. Worthington so earnestly pleaded.

ANY one in doubt as to how much or how little scientific capital is required to fit up a showy *Tribune* bulk-window should read the replies to Dr. Hammond's defence in the last issue of the *New York Medical Journal*. The London *Medical Record* characterizes Dr. Hammond's proposed treatment as "utterly ridiculous." The *Boston Medical and Surgical Journal* speaks of his "having brilliantly closed the hydrophobia season." Some of the Western press have been very outspoken and severe: indeed, we believe the general expression of opinion has been such that it will have a salutary effect in restraining the spread of the newspaper epidemic.

THE English colliers appear to appreciate the importance of sanitation. It is stated that eight hundred men at the Windon Collieries in Durham have suffered for a long time from improper water-supply, and have made many complaints to their employers. The latter refusing to listen to these representations, the men have struck. The Durham Pit Villages are said to be an abomination upon the face of the earth, and we hope the laborers will be successful in forcing their employers to give them suitable dwellings.

THE "quiz" advertisement to which we alluded in a recent editorial was printed in a column of the paper allotted to advertisements, and in the type and dress of an advertisement. Our judgment was therefore, from the premises, seemingly an inevitable one. Outside evidence has, however, since been brought to our knowledge, showing that the matter was put in the paper by an over-zealous reporter, without the knowledge of the quiz organization.

THE famous London surgeon, J. Erich Erichsen, has recently been on a visit to this city, and was the recipient of a complimentary dinner from a number

of medical gentlemen, including most of the prominent medical teachers and authors of our commonwealth. The affair was an exceedingly happy one in all particulars.

Dr. A. J. EIDSON (*The Amer. Med. Journal*, Oct. 1874,—Eclectic) has discovered that labor is greatly facilitated by placing the head of the woman towards the north. Difficult cases should be sent to the magnetic pole.

THE London *Lancet* says, "A contemporary states that a fee of \$150,000 was lately paid to an American surgeon for removing a wen by means of the galvano-cautery."

Who was the fortunate man? We suspect the "contemporary" must have been Mark Twain's organ.

CORRESPONDENCE.

NEW YORK SOCIETIES.

NEW YORK, October 6, 1874.

INSANITY OF INEBRIETY.

THE New York Neurological Society held a regular stated monthly meeting last evening, at which two very interesting papers were read: one by Dr. George Burr, of Binghamton, New York, on the Insanity of Inebriety, and the other by James J. O'Dea, of Clifton, Staten Island, New York, entitled, The Philosophy of Suicide.

Dr. Burr remarked substantially as follows:

It has been said many times, when an individual has been seen to sacrifice all consideration and prospect in life for the gratification of a desire for ardent spirits, that such a man must be crazy; that no sane man or woman would thus throw themselves away, and bring ruin upon every hope of the future. This view of the question is but a natural common-sense view; and yet it is held by comparatively few. The most common sentiment is that drunkenness is a vice,—a voluntary act of the subject,—for which he is morally and in every other way responsible. The object of the paper was to trace the relation of most of the forms of inebriety to an impulse as completely morbid as is to be witnessed in well-recognized varieties of impulsive mental derangement. By the term inebriety is meant a condition of the system calling for and demanding, through its sentient apparatus, the immoderate use of alcoholic drinks, either daily or at stated periods, according to the peculiarities of the case. The term does not mean merely a state of intoxication. Neither does it imply any particular effect of alcohol in any form upon the various organs and tissues of the body, nor that condition of the organization which Marcet has so well described as chronic alcoholism. All these are the effects, the consequences, of the indulgence. Other terms are frequently employed to designate this condition, such as methomania, dipsomania, propensity,

thirst. But the term dipsomania—meaning crazy for drink—is the most expressive.

There exists among all nations an inherent desire for ardent stimulants; and this propensity may be divided into two varieties,—1, a normal, healthy desire for stimulants to a moderate extent; 2, an augmented and inordinate demand, entirely at variance with a sound and healthful condition of the body or with its legitimate demands, and impelling the subject of it to acts of debasement and drunkenness.

In 1833, Dr. Woodward, of the Worcester (Massachusetts) Insane Hospital, in a series of essays, maintained that intemperance was a disease, and declared, from his own experience in the management of many hundreds of intemperate persons who had committed crimes which rendered confinement necessary, or who were insane in consequence of this habit, that this disease was amenable to treatment, and that "a large proportion of the intemperate in a well-conducted institution would be radically cured, and would again go into society with health re-established, diseased appetite removed, with principles of temperance well grounded and thoroughly understood, so that they would be afterwards safe and sober men." It must be here remarked that opinions like this have reference only to extreme forms of inebriety; the milder forms have usually been considered to be wicked or vicious indulgences censurable in the highest degree. The speaker differed from these views. He would refer every case of well-marked departure from a normal desire in the use of ardent spirits to the presence of some morbid influence. The difference between the severer and the milder forms of inebriety is one of degree only; the essential nature of each and their pathognomonic symptoms are the same.

The seat of this disease is undoubtedly in the sentient apparatus. It is, however, not to be referred to any particular pair of nerve-trunks, either to the pneumogastric, the glosso-pharyngeal, or the gustatory branch of the fifth pair; but, like the sense of hunger and thirst, or that of the *besoin de respirer*, it prevails throughout the entire organism. It is a morbid perversion of the natural sense. The impressions made upon the sensorium are false and unreal; unnatural wants are created by disordered nerve-communication, and unnatural sensations are experienced. In this respect these sensations somewhat resemble the hallucinations of sight and sound, when, as is well known, false impressions are made upon the eye and ear, and persons see unreal sights and hear unreal sounds.

The insanity of inebriety consists in the almost absolute power exercised by the morbid appetite over the operations of the mind, exciting ideas, emotions, and passions entirely at variance with the natural characteristics of the individual. The milder types consist of an abandonment of the individual to the influence of alcohol. He is impelled to commit acts which his sound and sober judgment would condemn. He does not have liberty of action, but must obey the strong uncompromising impulse which pervades his entire organism. He must drink, notwithstanding poverty is

coming in at the door, and starvation is staring his family in the face, and his character and reputation are passing away "like a summer cloud;" nevertheless he must drink! The parallel between the morbid impulse to drink and other and well-recognized branches of morbid impulse, as well as other forms of mental disorders, is very striking; and the exciting causes will be found to be identical. It may be safely asserted that the ratio of insane to the population of the United States is probably greater than in any other nation; and this for very good reasons. The wear and tear of life is more severe here than elsewhere: the great desire to accumulate wealth, the rage for speculation, the constant recurrence of political campaigns, and a certain amount of religious fanaticism, are causes that are constantly operating to disturb and exhaust mental energy. No time is given to recuperate wasted energies. What wonder, then, that many fall out, and the faculties become deranged! These same causes operate to excite inebriety, only, it is believed, in a much larger ratio. Compared with the number of insane, the number of inebriates must be tenfold. These causes augment and intensify the desire for stimulants. Alcoholic and kindred drinks are immediately resorted to, and the diseased appetite is immediately inaugurated.

Among the special causes of intemperance, which, in one case, induces disordered sentiments or feelings, in another, a disordered mind, and in another, a disordered appetite, are a blow upon the head, and concussion of the brain from a fall. In one, the injury has been succeeded by a mania proper; in a second, a complete transformation of character; while in a third is developed a love for ardent spirits. Other causes are, inheritance, irritation, suggestion; and in no variety of morbid impulse does *habit* have a more potent effect.

In conclusion, he reiterated his theory that the habit of drinking is caused by a disordered state of the mind. To refer the self-destructive acts of the inebriate to the same influences which in others incite to kill, to commit suicide, to steal, or to burn, appears to him to be consistent and proper. Whatever gentlemen may think, all will no doubt concur in the propriety of studying the subject from this stand-point, in the earnest hope that eventually some remedy will be found, some check be placed upon the sad and fearful ravages of inebriety. In relation to inebriate asylums, the essayist is a firm believer in the utility of public institutions for the exclusive treatment of inebriates. In this he was aware that he differed from the learned President of this Society (Dr. Hammond), whose late comments upon the management of inebriate asylums he regards as too sweeping and denunciatory. He admitted the justness of the learned gentleman's criticism, to a certain extent, upon the present management of the institutions now in operation. The means of restraint employed are, perhaps, not adequate; but it will be found that one of the most difficult problems to solve ever attempted is the proper adjustment, discipline, care, and treatment of inebriates. Many of the regulations must be sub-

mitted to voluntarily, and the patient himself must earnestly co-operate in every measure calculated to promote his reformation. He must not only concur, but he must co-operate in all such measures. In the New York State Inebriate Asylum, at Binghamton, from the 1st of September, 1873, to the 1st of September, 1874, the number of patients admitted was 190. Of these 23, or 13½ per cent., have proved refractory and unsubmitive. The rest have quietly submitted to the rules and discipline of the institution; and many have gone out, as is believed, fully restored. Measures are now being taken to inquire into the subsequent history of all those who have been inmates of the institution. A small proportion relapse. Of the 190 inmates during 1873-4, 1 has returned three times, and 16 are there for the second term of treatment. But there is a propensity to return in many diseases, especially when the person is exposed to the exciting causes. Mental disorders, as is well known, are very liable to return; and the records of the lunatic asylums will probably show quite as many relapses in proportion as will the inebriate institutions.

THE PHILOSOPHY OF SUICIDE.

By the term suicide we are to understand the intentional destruction of one's own life. It embraces all who kill themselves intentionally, or, as the legal phrase expresses it, "with malice aforethought," whatever be the cause of the act or the mental condition of the agent. It excludes those whose death results from immoderate self-indulgence or the too ardent pursuit of a favorite scheme. Fundamentally, suicide has reference to the individual in his personal and relational life. Its causes are of three main orders: general, special, and personal.* The general order of causes exists everywhere and under all circumstances, and includes religious belief, philosophy, age, and sex. The special order is that which is more circumscribed in range. It comprises all the various circumstances and accidents growing out of the social relations of the individual,—love-troubles, domestic difficulties, legal entanglements, habits of intemperance and immorality, financial losses and embarrassments. The personal order of causes has reference chiefly to the bodily and mental health of the individual.

It would be impossible in these short notes to do justice to the paper of Dr. O'Dea, which he intends to continue from time to time, treating the subject thoroughly. The following table, however, of suicides of ancient Greeks and Romans, together with a few remarks on the influence of sex and age on suicides, may be of interest:

NAME.	MODE.	CAUSE.
Pythagoras . . .	Starvation . . .	Tædium vitæ.
Demosthenes . . .	Starvation . . .	Downfall of Athens.
Clitomachus . . .	? . . .	Tædium vitæ.
Stilpo . . .	Intoxication . . .	?
Metrocles . . .	Suffocation . . .	Old age.
Menippus . . .	Hanging . . .	Financial losses.
Demonax . . .	Starvation . . .	Loss of influence consequent on old age.
Zeno . . .	Strangulation . . .	Fracture of a finger.
Seneca . . .	Phlebotomy . . .	Political reasons.

NAME.	MODE.	CAUSE.
Pauline, wife of Seneca . . .	Phlebotomy . . .	An attempt caused by unwillingness to survive her husband.
Cato . . .	Wound . . .	Political reasons.
Otho . . .	Wound . . .	Political reasons.
Panthea . . .	Poison . . .	Grief at the loss of her husband in battle.
Phila . . .	Poison . . .	Defeat and flight of her husband.
Arria . . .	Wound . . .	Defeat and arrest of her husband.
Scipio . . .	Wound . . .	Because he had fallen into the hands of his enemies.
Socrates . . .	Starvation . . .	The victory of Philip at Chæronea.
C. Lutatius . . .	Suffocation . . .	To avoid falling into the hands of Marius.
Lollius . . .	Wound . . .	The ill-will of Caius Cæsar.
Nero . . .	Wound . . .	Because condemned to death by the Roman Senate and people.
Lycambus . . .	Hanging . . .	Ridicule.
Lambianus . . .	Self-interment . . .	Because his writings were condemned and burned.
Aristarchus . . .	? . . .	A dropsy.
Erasistratus . . .	Poison . . .	An ulcer.
Eratosthenes . . .	? . . .	Loss of sight.
Silvius Italicus . . .	Starvation . . .	An incurable disease.
Diogenes . . .	? . . .	A violent fever.
Porcia . . .	Swallowed live coals . . .	Domestic affliction.

The influence of age upon suicide is a study of more than speculative interest, on account of its practical bearings and of the ease and precision with which it can be demonstrated. By age is meant the critical periods of life. These periods having many components besides the mere fact of years, it is apparent that what we have to examine is a many-sided phenomenon, including together with it the advance in life, the workings of physiological, mental, and sociological causes.

The maximum of suicides for both sexes occurs between the ages of 25 and 55. Previous to the twenty-fifth year there is a sudden increase from two suicides between the ages of 5 and 10 to one hundred and thirty-six between 20 and 25. After 55 the tendency to suicide declines, but more gradually than it rose, except at 65, where the number increases from eighty-one to eighty-three,—a rise so slight, however, as to be little worth considering.

There are, therefore, three suicidal periods in life: those of organic and mental growth, of organic and mental completion, and of organic and mental decline. In the first the chart shows 80; in the second, 942; and in the third, 311. Comparing the periods in round numbers, it may be said that they are as one for childhood and adolescence to twelve for adult life and to four for the years of bodily and mental decay.

The influence of sex and its attending circumstances upon suicide at the different periods of life is shown upon the charts. With females, as among males, there is a sudden and abrupt rise until the twenty-fifth year is reached. This rise is continued to the thirty-fifth year, at which the maximum of suicides occurs among women. The period from the twenty-fifth to the thirty-fifth year corresponds to that of the greatest pressure from domestic troubles and responsibilities, and also with the greatest activity of the maternal functions. The line thence descends abruptly to the forty-fifth year, whence it rises to the fiftieth—the critical period of mature female life,—and then goes down, down, until it reaches the level from which it started.

There are, therefore, two culminating points, and whilst the line on the male chart is undulating and sustained, that on the female chart is vertical and abrupt. The lower of the male culminating points is the higher of the female, and, contrariwise, the lower of the female is the higher of the male.

These charts do not show the relative frequency of suicides among the two sexes. The ratio of suicides to population in the United States is (for the period covered by the last decennial census) 25 to 100,000 among males, and 3 to 100,000 among females. The only periods at which suicides are nearly equal for both sexes is from 15 to 20 years, during which the number of boy-suicides was 34, of girl-suicides 32. After this the number of suicides among males is much greater than among females.

W.

SELECTIONS.

PREVENTION AND TREATMENT OF PUERPERAL DISEASES.

[We have extracted the following paper from the American Supplement to the *Obstetrical Journal of Great Britain and Ireland*, because it seems to us worthy of being read by the general profession, as embodying views and actions exceedingly novel and successful on a most important practical subject.]

THE Preston Retreat is a small lying-in hospital for reputable married women. The yearly average has thus far been about one hundred labors, but it is now rapidly increasing. It contains four wards, each with a capacity of 9153 cubic feet, and each furnished with five beds, of which not more than four are generally occupied at one time. The ventilation in winter is obtained by the escape of the cold and foul air through an old-fashioned fireplace, in which a jet of gas is kept constantly burning, and by the free admission of pure air, which has been heated in the basement by passing around steam-chests, with large radiating surfaces. In summer, the admission of pure air depends exclusively upon open doors and windows, and the ventilation is, consequently, less perfect than in winter. In the spring and autumn months, there are many days in which the temperature is too warm for the free admission of heated air, and yet too cold for open windows. These are, therefore, the two seasons of the year which I dread the most, and in which I avoid, as much as possible, crowding the wards.

The wards are used invariably in rotation. By close management, and by crowding walking patients together, one of these wards in its turn stands idle for two or three weeks. During this time the doors and windows are kept open. Before it is again occupied by patients, the walls, floor, wood-work, and furniture—all of which are painted—are thoroughly scrubbed with carbolic acid soap, and then mopped over with a solution of half a pint of carbolic acid (Calvert's No. 4), to one pail of water. From this time until the ward is again vacated, no portion of it, not even the floor, unless accidentally soiled, is touched with water.

The nurses wear such clothing only as can be washed. As soon as the inmates of a ward are well enough to take care of themselves or of one another, their nurse is relieved from duty. She now takes a soap bath, puts on an entirely clean suit of clothes, and goes into a ward which has been thoroughly ventilated and cleansed.

Before a new batch of patients falls to her care, she has had one week or more of rest. I visit the wards thrice daily, beginning always with the ward last occupied, and with the patient last delivered. Whenever a vaginal examination is needed, it is put off until all the other patients have been seen. The examining finger is then anointed with an ointment containing carbolic acid, and the hands are afterwards washed with carbolic acid soap. Post-mortem examinations I never perform. Whenever one is needed, an expert is called in, and remunerated for his services.

The beds consist of a tick filled with fresh straw and covered with an army blanket. After the discharge of a patient, her bed is emptied, and the tick, blanket, and bedclothes are boiled in water to which a little carbolic acid has been added. Each bed is furnished with a feather bolster and pillow, which are exposed on slats to the air when not in use. Once a year every bolster and pillow-tick in the house is washed, and the feathers baked and "renovated," as it is technically termed. They also pass through the same process whenever soiled, or whenever used by a patient whose convalescence has been delayed.

The patients come chiefly from the poorest classes; but many in more comfortable circumstances, with the hope of getting better care, seek admission on account of some difficulty attending their former labors. On this account, the proportion of difficult labors is much above the average. Those patients who have families often put off coming in until labor has actually begun, and then leave at the earliest possible moment. Notwithstanding this, since patients have the privilege of remaining four weeks after their delivery, the average stay of each one is sixteen days before delivery, and eighteen days after. Every patient, upon admission, takes a warm bath, and at least one a week thereafter before her delivery. If she exhibits signs of feeble health, she is at once put upon the use of quinia, and of the house mixture, consisting of two parts of the muriated tincture of iron, with three of dilute phosphoric acid. The habitual constipation of pregnancy is met by the administration, either in the morning of a teaspoonful of pulv. glycyrrhizæ comp. of the Prussian Pharmacopœia; or, at bedtime, of four Lady Webster's pills (pil. stomachicæ). When a more active purge is needed, the pulv. jalapæ comp. or the pil. cathartic. comp. (U. S. P.) is given. Headache and sleeplessness are treated by warm baths, by full doses of potassic bromide, and by the above-named medicines, when indicated; albuminuria is dealt with in pretty much the same way, but always with iron and phosphoric acid. The regular diet is plain and wholesome, yet more liberal than is usual in charitable institutions. Apart from the frequent use of aperients, a relaxed condition of the bowels is promoted by serving table-syrups at every meal, by fruits—fresh or dried, according to the season—and by all such vegetables as can be eaten raw, viz., lettuce, cress, radishes, leeks, onions, tomatoes, cucumbers, and cabbages. Of these, in this latitude, an ample supply is obtainable during nine months of the year.

When a patient falls into labor, she first has her bowels moved by an injection, and then takes a warm bath. The bag of waters is usually ruptured artificially, and the liquor amnii collected in a grocer's scoop. The second stage of labor is never allowed to linger; any delay is met by the use either of the vectis or of the forceps. As soon as possible after the birth and the removal of the child, the placenta is delivered by Credé's method. I may here remark that the still pulsating cord is first cut, then "stripped" of its blood, and as much as possible of its gelatin, and finally tied, when it has ceased to bleed and has become flaccid. Neither belly-band nor any kind of dressing is after-

wards applied, but the cord freely dangles about from the navel. Treated in this manner, it dries up without any bad smell, and falls off like a ripe fruit, without leaving a raw stump. Out of more than five hundred infants treated thus, not one has had a pouting or sore navel requiring treatment, and not one has had an umbilical hernia. I am also well satisfied that, by dispensing with the belly-band, I have had fewer cases of inguinal hernia. Those of my readers who wish a more detailed account of this method of dealing with the cord, can consult the *American Journal of Obstetrics*, vol. iii. p. 327.

Ergot is hardly ever resorted to as an oxytocic; but one teaspoonful of the fluid extract is invariably given as soon as the head presses upon the perineum. When the labor is over, the perineum is examined, and, if torn, is at once sewed up with silver sutures. The patient is now washed clean, and a binder and cylindrical compress applied, the latter in the hollow just beyond the fundus of the womb. The bedstead on which she has been delivered is next wheeled from the delivery-room to a ward and placed along the side of a bed, to which the woman now hitches herself over. Contrary to the generally held opinion that absolute rest after labor is indispensable, in no single instance has this muscular exertion apparently brought about a flooding. It seems rather to condense still further the uterine globe. Very rarely, indeed, has a flooding happened outside of the delivery-room. However warm the weather, a blanket is thrown over the patient, and a foot-warmer put to her feet. These remain until reaction sets in and she asks to have them removed. A mug of beef-tea made from Liebig's extract is now given, and the child put to the breast as soon as it will take it. Thereafter, in a natural convalescence, the woman gets tea, boiled eggs, bread and butter, for breakfast; potatoes, and some kind of meat, for dinner; stewed or fresh fruits, tea, bread and butter, for supper. On the morning following the day of her labor, the binder is removed for good, and she slips into a chair while her bed is making. This is repeated once or twice a day until the fourth or fifth day, when she, if so disposed, gets up and dresses herself. No patient quits her bed against her will; yet the force of example is so great that very few care to stay in bed, when they see their companions up and about.

No woman is allowed to suffer from after-pains. Whenever these are complained of, one-quarter grain doses of morphia are administered every hour until relief is obtained. In stubborn cases of after-pains I have found nothing act so promptly as the exhibition of ten grains of quinia every six hours, until the ears ring. For this valuable suggestion I am indebted to my friend Dr. Fordyce Barker. Bed-pans are not employed, except in cases of illness, or in cases requiring vaginal injections; but each woman has her own chamber-pot, which she uses indifferently, either in the sitting or the knee-elbow posture. Every woman is required to wash her own person at least once a day, and that with carbolic acid soap and a wad of fine oakum, which is at once thrown away. Only under very exceptional circumstances does the nurse cleanse the patient. Should the lochia become offensive, the woman is made to get out of bed and slip into a chair three or four times a day. This usually corrects the fetor; but if it does not, then and only then is a solution of potassic permanganate thrown up into the vagina. Firmly believing the nozzle of a syringe to be the medium of virus communication from patient to patient, I avoid the use of vaginal injections as much as possible. For a like reason, the temperature thermometer is not habitually used, but only in single cases as an aid to diagnosis.

Whenever the lochia are offensive, or the pulse is

over 90, or the thermometer indicates a temperature higher than natural, or pelvic pains are complained of, or, in short, whenever any untoward symptom appears, quinia is given in from six- to ten-grain doses every four hours, until the ears ring. In addition, for abdominal pains large doses of morphia are given, and the whole belly is painted with iodine, and covered with a mush-poultice. The canonical purge on the third day is dispensed with. A patient has usually a movement of the bowels either before or on the day in which she gets up for good. If this does not happen, she takes four Lady Webster's pills at bedtime, which then act on the morning of the sixth day. As soon after getting up as she feels strong enough, she takes a warm bath.

Thus far I have stated the means adopted at the Preston Retreat for the prevention and the treatment of puerperal diseases. I now propose to give my reasons for such of them as need some explanation.

But few words are needed to explain why the ordinary chamber-pots are used, and why patients are made, once or twice a day after the first, to get out of bed and slip into a chair. The presence of putrescent fluids in the utero-vaginal tract is recognized by all writers as the great cause of the autogenetic variety of puerperal disorders. But the recumbent posture of itself necessarily tends to detain these poisonous discharges in contact with the traumatic lesions of labor. These discharges may also be partly imprisoned in the vagina through the swollen condition of the more external soft parts, or partly corked up in the uterine cavity by the presence in the cervical canal of a putrid clot. In such cases detergent vaginal injections are highly recommended. But clinically they will be found of limited value; for they cannot reach high enough, and do not ordinarily dislodge a large clot even when situated low down. True, intra-uterine injections are not open to one of these objections; but, apart from their being attended at best with some degree of hazard to the patient, the operation is too delicate a one to be intrusted to a nurse. Besides, in hospital practice the nozzle of a syringe—to say nothing of the fingers of a nurse—is, I fear, so often one of the vehicles for the transmission of virus, as to make this means of disinfection of doubtful propriety. In a local outbreak of fever, especially of the diphtheritic form, I should, however, suggest the use, immediately after labor, of vaginal injections containing the nitrate of silver or the persulphate of iron, in quantities large enough to sear over the traumatic lesions of labor. Such injections I have had no occasion to try, but they ought to inhibit active absorption and promote healthy granulation.

While seeking a substitute for the syringe, my attention was directed to the fact that the act of sitting on the ordinary chamber-pot often forced out putrid shreds or fetid clots, which had not been washed away by vaginal injections. This led me to discard, except in cases of positive illness, the use of bed-pans or of any other utensil—such as urinals—which can be used by a woman when lying on her back. Shortly after making this change, I found that, for like reasons, some shrewd and very practical writers of the last and the present century urged an early departure from the recumbent posture. Further: a residence of some years in the East had taught me that Oriental women, at least, can with impunity get up and be about a few hours after delivery. Influenced by these facts, I decided, cautiously at first, to introduce into the wards of the Retreat a system of puerperal gymnastics, consisting in no restraint whatever as regards the position in bed, and in the daily release from an irksome confinement. I was much pleased to find that the muscular exertion needed for these movements, so far from inducing hemorrhage, excited the womb to contraction, and emptied it and the vagina of their putrid contents. I

can testify that whenever the lochia are offensive, these upright positions, repeated several times a day, are excellent deodorants, better in fact than any detergent vaginal injections. There is yet another advantage gained by this plan: it affords, in hospital practice, an excellent opportunity for bundling the bed and bedding out of the ward and giving them a much-needed airing. In a crowded hospital-ward the hygienic importance of such repeated disinfection can hardly be overestimated. At the risk of being called an enthusiast, I will go a step further, and hazard the assertion that here is a form of puerperal septicæmia not necessarily accompanied by putrid lochia,—at least not appreciably so,—but indicated by high temperature, rapid pulse, complete anorexia, heavy sweats, and, later, by herpes labialis, which stubbornly resists treatment until the patient is made to get out of bed. This I have seen often enough, after keeping a woman on her back for some pelvic disturbance, to prevent any mistake as to the relation of cause and effect.

Lying-in women are encouraged to get up for good when they feel so disposed, because there are, to my mind, strong objections to the rigorous maintenance of the recumbent posture. Labor is, in general, a strictly physiological process, and there can be no sound reason why it should be made to wear the livery of disease. Nature teaches this very plainly, for most women wish to get up long before their physicians are willing to let them. The fact of a woman's wishing to get up is to me a very good reason why she should get up. In the second place, few physicians will deny that nothing so relaxes the tone of muscular fibre as a close confinement in bed. In my experience a woman ordinarily feels stronger on the fifth day than she does on the ninth, if rigorously kept under quilts and blankets. Once more: the upright position not only excites the womb to contract, but, by distributing the blood and equalizing the circulation, it actually lessens the amount of the lochia and shortens their duration. On the other hand, the dorsal decubitus keeps up a passive congestion of the womb as a whole, the engorgement of the greatly hypertrophied placental site, and a blood-stasis in the now thickened posterior wall,—all important factors in hindering the process of involution. Again: uterine diseases are hardly known among those nations whose women early leave their beds. From passages in the writings of the classics, it is evident that among the ancient Greeks and Romans, those models of physical strength and beauty, the women arose and even bathed in a running stream very shortly after delivery; in some cases, on the very day. Finally: what is sounder than all theory, a sufficiently long and well-sifted experience has proved to me that, by such a treatment, convalescence is rendered far more prompt and sure. At this result, very unexpected to the multiparous patients of the Retreat, they are constantly expressing their surprise.

The arguments against the customary purge on the second or the third day are to my mind very sound. I am well satisfied that the "milk-fever," for which it was originally introduced into practice, is essentially a myth. Genuine "milk-fever," as such, is a rare complication, and, when present, of no significance whatever. Unless the nipples are chapped or abraded, the engorgement of the breasts hardly ever leads to abscesses. In proof of this assertion, how rarely does mastitis follow stillbirths! In the vast majority of cases, the occasional constitutional disturbance, the chill-and-fever on the third or fourth day—the so-called "milk-fever"—is owing to a septic cause, and not to a mammary one. True, the breasts are by this time swollen and painful, but it is a mere coincidence, and coincidence is here mistaken for causation. Purges are, therefore, not only wholly unnecessary, but they disturb the equilibrium,

and, what is worse, promote the absorption of septic matter. Partly from increasing the activity of the absorbents, the hemorrhages of labor are very liable to be followed by blood-poisoning. Now, the same result may be logically predicated of a depletion in the shape of a purge. Were my readers to go over their cases of puerperal fever or of other puerperal diseases, I think that they will find some of them dating from the day on which a purge had begun to act. Is it not more than a mere coincidence that these diseases attack a woman usually on the third or the fourth day—viz., the day of or following the administration of the customary purge? Three instances of puerperal peritonitis, two of them ending in death, have come to my knowledge, which were referable as plainly as could be to purgation. In one, the lady was slowly but surely mending from the effects of a severe instrumental delivery. For some reason or other she took, in the third week, an ordinary dose of citrate of magnesia. This violently purged her, and at once brought on a fatal attack of fever. In the other two the patients could not have been doing better, until they got a dose of castor-oil, which was given for no other reason than that the authors of our text-books were haunted by the bugbear of "milk-fever." Did space permit, I should like to show that this opinion is not shared by myself alone; that cases of phlegmasia dolens have been traced to the effects of a purge, and that the use of aperients during an epidemic of puerperal fever has been strongly condemned.

Quinia is given without stint, because, apart from its well-known tonic and antiperiodic properties, it possesses others which make it, above all remedies, the one best suited for puerperal disorders. By lowering high temperature it retards the oxidation of tissue, and hinders the formation of fibrinous concretions. By shortening the excursions of uterine fibres in their alternate contractions and expansions, it lessens the diastolic engorgement of the womb, diminishes the calibre of uterine blood-vessels, and thereby tends to keep their protective coagula from becoming loose and soluble. By contracting the placental site it proportionally limits that area of absorption. By constringing the coats of the capillaries, and by its inhibitory power over the migration of colorless blood-corpuscles, it either arrests suppurative inflammation or restrains its violence. Finally, it seems to exert a positive curative action on the blood in cases of putrid or purulent absorption. Clinically, I have found nothing comparable to quinia as a prophylactic against puerperal disorders, as well as a remedy for them. But it must be given early, frequently, in large doses, and pushed to a high grade of cinchonism.

Ergot is a very untrustworthy oxytocic. One never can tell beforehand whether it will behave kindly, or run a muck. It is, therefore, no favorite with me. The vectis and the forceps, being under perfect control, are far better oxytocics; their aid is therefore often invoked, in order to save a woman's strength, and to avoid that laxness of uterine fibre following a long and weary labor. Ergot is, however, given as the head is about to emerge, in order to lessen the chances of a flooding or of unruly after-pains, and to aid the process of involution by condensing the uterine globe to its minimum size. For an analogous reason I feel persuaded that Credé's method of placental delivery provokes to a more complete involution. It certainly empties the womb of all clots, and squeezes it down to its smallest capacity.

The prolonged use of the binder is given up, for reasons which have been published in this journal (April, 1874, p. 8). I shall therefore not repeat them. I wish, however, here to state that even its brief use during the first few hours after labor is not held by me as a cardinal point. I begin to have grave doubts

whether it is of any value whatever in the prevention of hemorrhage. On the score of utterly abandoning it I am quite open to conviction.

So much for the reasons on which the foregoing measures are based. Let me now give the results. Up to date there have been 756 cases of delivery, with six deaths. The following are the order and the numbers of the fatal cases, as copied from the Case-Book:

"No. 22. Concealed accidental hemorrhage from the gravid womb. No. 203. Puerperal peritonitis. No. 289. Acute chorea. No. 360. Caries of petrous portion of the temporal bone. No. 398. Chronic pelvic abscess. No. 647. Septic pneumonia."

The case of puerperal peritonitis was an isolated one. The woman had been abandoned by her husband, to whom she was devotedly attached. She fretted and brooded over this desertion in so despairing a manner as to make me apprehensive of mania. Three other patients occupied the same ward with her, but they escaped from contagion.

Cases 22, 289, and 360 were deemed by me so exceptional that their histories were reported to the Obstetrical Society of Philadelphia, and afterwards embodied in its Transactions (*Am. Journal of Obstetrics*, vol. ii. p. 286; vol. iii. p. 140; vol. iv. p. 126). Case 398 was that of an old pelvic abscess following a previous labor—viz., an abortion produced by the kick of a drunken husband. During the last week of utero-gestation this abscess began to inflame and to cause her so much suffering that very large doses of morphia were needed to control it. Labor very greatly intensified this distress. When the womb was emptied a tumor was found in left broad ligament, and all the symptoms of localized peritonitis were present. Under appropriate treatment she soon began to mend; but on the fourteenth day she was suddenly seized with violent abdominal pain, and fell into a collapse, from which she never rallied. An autopsy, made by my friend the editor of this Journal, revealed an old pelvic abscess, which had burst into the cavity of the abdomen. This case, it seems to me, cannot fairly be attributed to a septic cause, but to the ante-partum recrudescence of an old lesion. Case 647 is one of doubt in my mind. There were no appreciable pelvic or abdominal lesions; and yet, in default of an autopsy, which was not permitted by her friends, I think it fairer to attribute the pneumonia to blood-poisoning rather than to a non-septic cause.

To sum up, then,—out of 756 cases of labor there have been 2 deaths from septic causes; 1 death from the bursting of an old abscess; 1 death from hemorrhage; 2 deaths from non-puerperal diseases.

Apart from the above record the Case-Book exhibits no case of phlegmasia dolens, and none of pelvic abscess. One woman, however, had, I am told, a pelvic abscess at home. Through fright at an outbreak of measles in the building, she insisted on rising from her bed and on being discharged on a wet winter night. Although a large proportion of the inmates were primiparae, and two of them confirmed epileptics, but two cases of eclampsia took place, and these in women who had not been subjected to any prophylactic treatment. The one, while laboring under violent convulsive attacks, was brought in a hack by her friends. The other was seized the day after admission. Both recovered under repeated rectal injections of drachm doses of the hydrate of chloral, and a final delivery under ether with the forceps.

Since nothing is so fallacious as statistics, even when based on large averages, it is with much diffidence that I offer the above meagre data. They may not sustain my views; but they will, I hope, show that lying-in women can be gainfully treated in a manner less artifi-

cial than is customary, and more in accordance with the maxim *naturâ duce*.

One word more: For many reasons the statistics of a lying-in hospital can never compete with those of private practice. Of these I shall adduce but two. In the first place, the former are more trustworthy, for physicians very naturally shrink from reporting their fatal midwifery cases as such. I have known a death from post-partum hemorrhage returned as one from "anæmia," and another from puerperal albuminuria as a case of "pneumonia"—œdema of the lungs being present; whilst fatal cases of puerperal septicæmia are constantly being certified to under the heading of some prominent symptom which tells no tale, such as "peritonitis," "pleuritis," or "pneumonia." For instance, during a period of eight weeks of this year, I was asked to see eight cases of puerperal fever,—four of them from one Sunday to another. Of these all but one proved fatal. During the same time I casually became cognizant of seven other fatal cases. Now, during these eight weeks I studied with much interest the weekly returns of the Board of Health, and found there reported just twelve deaths from "puerperal fever." There were, however, also reported eleven deaths from "inflammation of the peritoneum," one death from "child-bed," and one each from "septicæmia" and "pyæmia." Comment on the above is unnecessary; the figures speak for themselves. In the second place, physicians naturally shirk the worry and anxiety, the delay and trouble incident to difficult labors in their private practice, especially when such occur in a class from which they can expect no adequate remuneration. A hospital thus becomes the Cave of Adullam for all these abandoned cases. For instance, out of the six fatal cases which I have reported from the Case-Book of the Retreat, the one of chorea and that of hemorrhage were sent to the institution by the family physician,—the former on account of her being unmanageable at home, the latter because her labors were growing more and more difficult from an exostosis. The two epileptics* adverted to, two distressing cases of phthisis and valvular disease of the heart, and many of difficult labor in multiparae, come under the same category. There are at present in the building two women not yet delivered, who were sent there by their respective medical attendants. The one is an epileptic primipara; the other a secundipara with a vesico-vaginal fistula,—the result of craniotomy in her previous delivery. It is thus that the death-rates of lying-in hospitals show to disadvantage beside those of private practice.

GLEANINGS FROM OUR EXCHANGES.

MALARIAL PARAPLEGIA (*The Clinic*, October 3, 1874).

—Dr. C. E. Beardsley reports four cases of paraplegia in children from three to five years of age, who were seen twenty-four hours after the first attack. All of them were females, healthy in appearance, well nourished and well clothed. None complained of pain. The temperature was nearly normal. Pulse regular, but a little accelerated. They were cheerful, with good appetite. No difficulty in micturition or defecation. The muscles of the upper extremities were perfect in all of their movements and obeyed the dictates of the will. There was anæsthesia of both lower extremities, with absolute paralysis of all the muscles. The above symptoms were developed suddenly without any known cause, but were accompanied by a piercing cry and loss of motion. One of the cases proved fatal. Spinal

* I am not aware that epilepsy predisposes to puerperal eclampsia—at least I have not found it to do so. But many physicians look upon it as a dangerous complication in labor.

congestion probably existed in all of them, and in two spinal hemorrhage occurred, malaria being the cause in all. The treatment consisted of first a saline purgative, followed by bromide of potassium for some hours with quinia; then quinia alone some hours; finally the galvano-faradic current.

EMULSIO CARNIS.—At a meeting of the Société d'Emulation pour la Science Pharmaceutique, M. Yvon proposed the following as an excellent form for the administration of raw meat:

R Raw meat, ℥viii;
Sweet almonds, ℥ijss;
Bitter almonds, ℥iss;
White sugar, ℥ijss.

The almonds are blanched, and the whole beaten together in a mortar until a rose-colored homogeneous paste is obtained. This is of an agreeable flavor, and may be mixed with water to form an emulsion, or it may be beaten up with the yolks of eggs, and mixed with milk instead of water.—*Detroit Review of Medicine and Pharmacy*, October, 1874.

Mr. James Kemble, in the *American Journal of Pharmacy* for October, proposes the following very similar formula:

R Fresh raw beef (lean), ℥vi;
Sweet almonds, deprived of their shells and roasted, ℥i;
Bitter almonds, ℥vi;
Sugar, ℥vi;
Glycerin, ℥ii;
Water sufficient for emulsion, ℥i.

Rub or beat the beef, almonds, and sugar to a fine pulp in a wedgwood or wooden mortar, then add water gradually until a smooth emulsion is formed, and strain through a sieve or coarse cloth; return the residuary mass to the mortar, manipulate with the balance of the water until f℥xiv are obtained, strain all through a finer strainer, add the glycerin, and bottle; the bottle is to be kept well corked. Dose, f℥i, containing ℥iii of the beef.

The physician, in prescribing, can order the addition of brandy, pepsin, or any other medicine he wishes to administer at the same time.

RATTLESNAKE-POISON (*The Southern Medical Record*, September, 1874).—Dr. S. M. Rivers relates several cases of snake-bite, in one of which death took place within three hours after the reception of the poison. He describes the effects of the poison as those of a narcotic sedative, consisting of an intense burning in the wound, extending over the body, even to the top of the head; vertigo, nausea and vomiting, dimness of vision, irregular spasmodic action of the muscles; then delirium, relaxation, depression of the vital powers, and death by syncope. The only reliable remedy is powerful alcoholic stimulation in conjunction with ligatures above the wound, and suction by means of cups or the mouth directly over it.

MISCELLANY.

FEMALE ARMY-SURGEONS.—The Vienna *Medicinisch-Chirurgische Centralblatt* reports that the Committee of the Society for the care of the Sick and Wounded in War in St. Petersburg has approved of a proposal for allowing women to perform the duties of military surgeons in the field and in stationary hospitals. To carry out the plan it is intended to institute courses of instruction for female army-surgeons (*Feldscheererinnen*) in the Russian universities.—*London Medical Record*.

SLOW PROGRESS OF HOMŒOPATHY IN GREAT BRITAIN.—The *Medical Press and Circular* notices a leading article in the *Homœopathic Review*, in which the latter laments over the unattractiveness of the homœopathic practice, and makes an appeal to its readers to unite in seducing, if possible, the rising generation of the medical profession. The *Review* makes the statement that "of the towns in England above 10,000 and below 20,000 population at the last census, 45 possessed no qualified representation of homœopathy at all, and twelve other towns had only one each; of the towns between 20,000 and 50,000 population, no less than 38 had no resident homœopathist,—14 of them had only one each, and 5 other only two each; of the towns between 50,000 and 100,000, 9 had no homœopathic physician, 7 had only one each, and six others had only two each; while there were, and are actually, 4 towns above the 100,000 limit in which no homœopathist has settled."

The *Review* further says, . . . "Neither can we feel satisfied that our hospitals and dispensaries do at all what they might do in the way of influencing third and fourth years' students. What has London done in this matter with its hospital of sixty beds? What has Birmingham with its well-trying staff and influential committee? What have the Liverpool dispensaries, which admit their 10,000 to 12,000 cases a year? Is it not from these places that our recruits have come, or are coming? . . . The local influence of these institutions on the members of the profession, and on the students in our metropolitan and provincial schools, is practically nil."—*The Medical Record*.

MEDICAL BOARD OF BELLEVUE HOSPITAL.—The following is the Medical Board of Bellevue Hospital as constituted by recent resolutions of the Commissioners of Public Charities and Correction:

Consulting Physicians and Surgeons.—John T. Metcalfe, B. W. McCready, William H. Van Buren, Isaac E. Taylor, Fordyce Barker, Lewis A. Sayre, Alexander B. Mott, and John J. Crane.

Visiting Physicians and Surgeons.—Austin Flint, Sr., James R. Wood, Alonzo Clark, Henry B. Sands, Alfred L. Loomis, Stephen Smith, Wm. B. Eagar, Ernst Krackowizer, Edward G. Janeway, Frank H. Hamilton, Francis Delafield, Thomas M. Markoe, William H. Thomson, Erskine Mason, Gouverneur M. Smith, and John W. S. Gouley.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 6 TO OCTOBER 12, 1874, INCLUSIVE.

HUNTINGTON, D. L., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Angel Island, California. S. O. 101, Department of California, October 1, 1874.

PHILLIPS, H. J., ASSISTANT-SURGEON.—To report in person to the Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 218, A. G. O., October 7, 1874.

LORING, L. V., ASSISTANT-SURGEON.—Assigned to duty at Camp Apache, A. T. S. O. 86, Department of Arizona, September 18, 1874.

CORSON, J. K., ASSISTANT-SURGEON.—Granted leave of absence for one month, provided he furnish a suitable substitute during his absence. S. O. 161, Department of the South, October 7, 1874.

SATURDAY, OCTOBER 24, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON SOME AFFECTIONS PECULIAR TO THE FEMALE URETHRA.

BY WILLIAM GOODELL, M.D.,

Professor of the Diseases of Women and Children in the Hospital of the University of Pennsylvania, etc.

THE female urethra, from its shortness, elasticity, and large calibre, is very rarely narrowed by strictures. But it is liable to a class of disorders from which the male urethral canal is almost wholly exempt. The most common and the most painful of these is the one I purpose to show you in the person of this woman.

She is forty-three years old, but constant suffering has made her look much older. In fact, from her great emaciation, care-worn expression, and general cachectic appearance, one might readily suppose her to be the victim of some grave constitutional disease. Her history, in brief, is as follows. Four years ago, while in perfect health, her urine began to scald her. The pain, at first bearable, daily grew worse, until it now is so acute that she holds her water as long as possible, and when passing it clutches the bed-post in her agony. The act of voiding the last few drops gives her the most suffering. Before long, cohabitation became painful, but, with that submissive affection which characterizes many a wife, she yielded to her husband's wishes until it could no longer be borne. For several months she has ceased to have intercourse with him. This is, of course, a source of domestic unhappiness. Unless she stoops and widely straddles her legs, walking is attended with much pain. She complains of a constant heat and throbbing in the external organs of generation, has more or less leucorrhœa, and finds her linen often stained with blood and her urine streaked with it. By brooding over her sufferings and over her incomplete conjugal relations, she has got into a very morbid state of mind. Now, most of these symptoms are so characteristic of some utero-vaginal affection, that the physicians whom she has consulted have been misled to direct their attention to the womb and vagina. Applications have been made to the cervix uteri, which, by the way, is somewhat eroded; vaginal suppositories have been used, and even a pessary has been introduced. What has served still further to lead them astray is a marked sympathetic or reflex pain in the left ovarian region, which is almost always pathognomonic of uterine disease. I ought to do them the further justice to add that they saw her before her sufferings had become as acute as they are at present. Nor can I afford to be uncharitable, for I myself have made the same blunder.

As I separate her thighs and expose the meatus urinarius, those of you on the lower benches can see, peeping out of it, a small crimson and wart-like body. It has received the names of urethral car-

uncle, vascular tumor, and vascular excrescence of the urethra. I seize it with this toothed forceps, and by very gentle traction bring it wholly to view. It now looks like a small Antwerp raspberry, and shows a broad base of attachment just within the lower verge of the meatus. Insignificant in size as this little growth is, it has embittered this woman's life for the past four years. Notice its vascularity: it bleeds on the slightest touch. Remark also its extreme sensitiveness: although profoundly anesthetized, the woman flinches and draws up her limbs. Were she not under the influence of ether she would writhe under the brush of a feather. Let me here remark that the vulva and outlying reproductive organs of a woman are the last to yield to the influence of an anæsthetic. Sensation is here so acute that it will remain long after other peripheral nerves have become benumbed. Thus, in the attempt to pass the hand into the vagina for the purpose of performing version or to introduce a speculum in cases of vaginismus, although the woman may be breathing stertorously, she will often so resist as to need a fresh instalment of ether. I mention this fact not only for your future guidance, but also as a partial explanation of her acute sufferings.

You must not infer that every case of caruncle presents symptoms as exacting as these. In the majority of cases there will be no constitutional implication, and the woman will complain merely of discomfort or of pain during the acts of micturition and of coition. But, on the other hand, worse cases will be met with,—cases in which, by loss of rest, constant suffering, and endless brooding, insanity has been induced. Some women have even been goaded by their anguish to commit suicide. Last autumn I saw a young married lady who was broken down in mind and body by her sufferings. She was peevish, morose, and melancholic, and had dysmenorrhœa and every imaginable ache. Coitus had not been indulged in for months, and she had taken to her bed. Neither her medical attendant nor myself could believe that the presence of a urethral caruncle satisfactorily accounted for pale lips, hollow cheeks, sunken eyes, and for her grave mental and physical manifestations. I sounded her heart and lungs, investigated the condition of her abdominal organs, examined the cervix uteri for a cancer, and finally, I am ashamed to confess, straightened out a somewhat anteflexed womb. Yet, after we removed the caruncle, she became another woman. As if by magic, all her pains and aches, even her dysmenorrhœa, left her. She got out of bed, gained rapidly in flesh, is now an active house-keeper, and, what is more rare, a very grateful patient.

These torturing growths are more common to the married than to the single, and are usually found in women who have passed the prime of life. I am inclined to think that they generally owe their existence to the congestion of the urethral plexus of veins,—such, for instance, as is induced by the pressure of the gravid or the displaced womb, or by the pressure of an over-distended bladder or rectum. In fact, pretty much the same causes are at work

which tend to produce piles. Habits of uncleanness may also generate them, and so may any irritating leucorrhœal discharge. Gonorrhœa is likewise said to be a cause, but I have seen no instance in which they could be traced to this disease. They consist of hypertrophied papillæ covered with a layer of tessellated epithelium, and are largely supplied with nerves and blood-vessels. They may be single or multiple, sessile or stalked, pink or scarlet, and are usually found on the lower verge of the meatus. I have, however, seen them stud the whole circumference of this opening, and occasionally have found them extending up the canal for a distance of half an inch or more. In size they range from that of a pin's head to that of a pigeon's egg, but I have never met with one larger than a good-sized raspberry. The suffering caused by them bears no relation whatever to their size. Very small ones may give rise to intolerable anguish, while a large one may produce merely a sense of discomfort. The more vascular and vivid in color, the more sensitive do they seem to be. Some authors describe a pale, non-vascular, but exquisitely sensitive tumor of the urethra, which appears to be neuromatous in character. This I have never met with. I have, however, twice removed from unmarried girls a worm-like tumor, which dangled from the vestibule. It was pale in color, but seemed to give no discomfort.

Since most of the lesions of the reproductive apparatus, such as vaginitis, uterine displacements, etc., give rise to vesical disturbance, and since the symptoms are not always so typical as in the case before us, a urethral caruncle is very likely to be overlooked by a physician. Reflex symptoms, uterine in their expression, will also tend to lead him astray; while a very natural delicacy prevents him from making the needful visual inspection of the parts. Early in my practice a mortifying blunder of this sort taught me to make it a rule always to inspect the urethral opening whenever dysuria is complained of. But woman's modest nature—nor would we have it otherwise—instinctively resents such an examination. If brusquely proposed, it will almost always be denied. How then is it to be effected? Let me here give you a hint worth knowing. Never suggest to a woman the necessity for making an ocular inspection of her person, but do it without her consent. Let us suppose that you are called in to a case in which dysuria is a prominent symptom. You will very naturally infer the existence of some uterine lesion, and will, of course, ask for an examination with the speculum, to which most women will submit. While exploring the uterus with the index-finger, you may with the thumb press upon the meatus, and notice whether the contact elicits pain. During the introduction or the withdrawal of the speculum you can always visually inspect the parts without the knowledge of the woman. Now, in my experience, whenever you can confidently say to your patient, "I have discovered the cause of your trouble; here it is," and then by digital pressure upon the caruncle can convince her of the correctness of your statement, she will offer no resistance to any future needful expo-

sure of her person. Under all circumstances, however, you must not forget to go through with the formality of covering her with a sheet; for just as you gild and sugar-coat what is bitter to the taste, so must you gild and sugar-coat what is bitter to the mind.

What is the prognosis of this affection? Very good, when the caruncle dangles from the meatus by a slender stalk. Very guarded, when it is sessile or multiple, and especially when it extends up the canal. Like the heads of the fabled hydra,—when ever a sessile caruncle is removed, one or more are very likely to spring up from its stump like mushrooms. Yet even then a cure is usually attainable; while at their worst, as I shall presently show you, their growth can be restrained and the woman made comfortable.

Now comes the final question: What are our resources for the cure of this affection? When distinctly pedunculated, one snip of the scissors is all that is needful for a cure. But when sessile, as they usually are, difficulties arise in their removal which demand the administration of ether and the aid of two assistants.

Let me now illustrate this on our patient. She lies in the lithotomy-position, fronting a good light, and with her knees supported by these gentlemen, who also place their fingers on each side of the meatus and stretch it open. I now seize the growth and carefully remove it by repeated clips of the scissors. I take care to include a portion also of the surrounding healthy mucous membrane. To prevent its otherwise sure return, I quickly dry the raw surface, sear it with the frayed end of a match moistened with fuming nitric acid, and then with a little olive oil decompose any excess of acid. The bleeding was at first quite free, but the acid has, as you see, completely stayed it.

This, however, is not always the case. Three months ago I removed for the second time a cluster of sessile growths, and found at my next visit, twelve hours afterwards, that the lady had lost and was losing too much blood. I staunched the bleeding point with ice and Monsel's salt, and put on a compress with a T-bandage; but at my next visit, six hours later, I found her quite blanched from a recurrence of the hemorrhage. I now ineffectually applied the solid stick of lunar caustic, and then tried to nip the bleeding point with a serrefine, but the tenderness of the part was so great that she would not permit any further interference; nor would she again inhale an anæsthetic. For a moment I was at my wits' end to know what to do. The prospect of spending an hour or two at her bedside, with my finger pressing on the urethra through the vagina, was not an agreeable one. But I finally succeeded by stuffing a sponge half-way into the vulvar opening. Its elasticity and that of the perineum, on which it rested, made the needful pressure upon the bleeding surface.

For avoiding this complication, and also for insuring a complete destruction of the growth, the galvano-caustic loop is undoubtedly the best instrument. But its expense will always put it out of the

reach of those of you who expect to practise in the country. A red-hot knitting-needle could, at a pinch, be used as a substitute.

But it is high time to return to our patient. The after-treatment will consist of the application twice a week of the undiluted commercial carbolic acid (Calvert's No. 4), until the raw surface has skinned over. By the use of this agent I have best succeeded in preventing a crop of small growths from springing up from and around the site of the parent growth. Sometimes you will have to repeat the cutting operation, but not often, if you follow the plan of treatment I have laid down. Once, in an obstinate case, which had passed through several hands and had stubbornly resisted repeated operations, I gained a cure by first cutting off the growth, and then by forcibly dilating the urethral canal with the expanded blades of a dressing-forceps until it admitted my index-finger. I argued that by stretching the muscular coat of the urethra I should release the involved plexus of veins from its spasmodic contraction and thus relieve their congestion. My friend Dr. Theophilus Parvin has succeeded by excising the growth, and bringing the edges of the wound together with stitches. By this procedure the site of the caruncle is covered with healthy tissue, and the chances of its return greatly lessened.

But every woman will not submit to the cutting operation. What then is to be done? Whittle the end of a match to a point, and with it touch each growth twice a week with the crystals of carbolic acid made fluid by heat. This is a very painless operation, and one which you will find very effectual in mummifying the tumor and blunting its sensitiveness. So prompt, indeed, is the action of this acid as a local anæsthetic, that, immediately after its use, I have quietly snipped off the tumor without the knowledge of the woman. For analogous conditions, Dr. A. W. Edis recommends (*British Medical Journal*, April, 1874, p. 449) the use of a saturated solution of chromic acid. It should be applied in the same manner as the carbolic acid, but with more care, and should afterwards be neutralized by pledgets of lint dipped in a strong solution of carbonate of soda. In this relation let me say that during a uterine treatment you will occasionally discover a painless caruncle. If pedunculated, snip it off; but if sessile, be wary of touching it, lest its removal should cause the growth of secondary painful ones.

There are a few other affections of the female urethra, of which I have no examples to show you, but which you will at long intervals meet with. One of them is a granular erosion of the lining membrane, very analogous to that of the cervix uteri. The pain in micturition is excruciating, and the whole urethral tract is tender to pressure made by the finger in the vagina. Upon gently stretching open the meatus, you will find the mucous surface highly congested and denuded of epithelium. This will usually yield to the passage of a pine stick of the size of a catheter, smeared over with undiluted carbolic acid, the urethra being immediately afterwards injected or swabbed with olive oil. This acid

may be boldly applied once a week until the local symptoms disappear. In obstinate cases one application of nitric acid, made in precisely the same manner, will promptly cure your patient. But its use is open to the very grave objection of often causing an obstinate narrowing of the canal, which may make the woman's condition worse than before.

Another affection of the urethra is prolapse of its mucous coat. This usually happens in children, but you will occasionally see it in adults. It is readily told from a caruncle by its less vivid color, by the absence of bleeding, by a low grade of sensitiveness, and by its involving the whole circumference of the meatus. A cure is here attainable either by snipping off a thin strip of the prolapsed mucous membrane, or by one or two applications of nitric acid in a narrow streak around its whole circumference. In either case the cicatrization of the wound will be hastened by subsequent touches with the lunar-caustic pencil.

Very rarely, indeed, will the urethra be the seat of a true polypus. When present, it starts usually from a point high up in the canal, and very generally escapes detection until the patient has passed through several hands. Sometimes it dangles in the bladder, and then stops the flow of urine like a ball-valve. Whenever the act of micturition is obstructed, the physician should search the bladder for a stone, or other foreign body, and, failing to discover one, should dilate the urethra and explore it with his finger. A polypus should be twisted off, or snared in the noose of a double canula. Once removed, it never returns.

A cancer affecting the urethra primarily is a very rare disease. I have seen but one example of it. The woman suffered from obstruction, and I wished to scrape away the growth, but she would not consent, and I lost sight of her. If a removal of the morbid mass is not possible; the most that can be done is to keep the canal open by the daily passage of a catheter and the occasional use of a laminaria tent.

The last affection to which I shall advert is not strictly one of the urethra. I refer to inversion of the bladder through this canal, an accident of which several cases have been reported (*Gazette Medicale de Paris*, January, 1874, p. 8). At first blush this may seem to you an impossible accident; but remember how dilatable is this canal. Through it very large calculi and other foreign bodies have been removed from the bladder. Again, in cases of imperforate hymen, or of absence of the vagina, coition usually takes place through the urethra. The treatment here is to replace the bladder, and to narrow the urethral canal by removing a strip of mucous membrane and by stitching the edges of the wound together.

ALBUMINURIA.—Dr. Girgenson has discovered that the albumen contained in the urine of nephritis differs from that found in cases of accidental albuminuria. The tannin compound of the former contains 37 per cent. of tannin, while that of the latter contains about 20 per cent. The albumen of the blood-serum reacts with tannin in the same way as that of nephritic urine.

ORIGINAL COMMUNICATIONS.

A CASE OF RUPTURE OF THE UTERUS.

BY H. G. LANDIS, M.D.,

Niles, Ohio.

ON the night of September 22 I was called to attend Mrs. O., æt. 34, nativity Ireland, in labor for the tenth time. She had already had four still-births and one instrumental labor, all of them being described as long and difficult. She was a very short, stout woman, with a cleft palate; and her sister, who was her sole attendant, was the subject of a large hare-lip. Labor began at 10 P.M., and yet in three-quarters of an hour the os was sufficiently dilated, and a large bag of waters bulging half-way to the vulva. The anterior lip of the cervix was peculiar, being at least an inch long, as was also the posterior lip; and both were thick and œdematous, and the seat of several old rents. They seemed to hang loosely like a thick fringe from the already dilated os internum. The pelvis was deformed from rachitis, the conjugate diameter measuring barely three inches. The vertex presented in the first position. The pains were moderate and the woman very restless, persisting in getting out of bed after nearly every pain, sometimes standing, and often sitting on the chamber. As there was considerable liquor amnii and the "bag" had fulfilled its purpose, I tore the membranes, after which the head forthwith engaged in the superior strait. The pains continued as before, the woman refusing to lie quietly in bed, and the head was stationary. At 2 A.M. of the 23d I sent for the forceps, intending to apply them within an hour more if the head made no advance, as the cervix seemed to be somewhat more œdematous. Shortly after this she lay down, and had two pains of greater force than any before, but not at all violent, aiding them for the first time by pulling on a sheet fastened to the bed-post. Just after the second pain I found the head lower down than before and the sutures overlapping, and was hopeful for a natural termination if the pains continued in this wise. But, in spite of all that could be said, she again arose, and shortly after standing up (at 2.30 A.M.) gave a short cry and complained of a great cramp in the belly. The labor-pains disappeared. There was, however, no shock; no symptom but steady pain. In a few minutes she lay down, when the head was found to have perceptibly receded; the abdomen had also changed in shape, being more uniformly convex instead of the sharply protuberant outline of the uterus before noticed. There was still nothing in the woman's pulse or general condition to warrant the conclusion that so grave an accident as rupture of the uterus had actually happened, but speedy delivery was plainly indicated, so at 2.45 I applied the lower (male) blade of the forceps. It was adjusted with great ease. On introducing the left hand preparatory to applying the upper blade, I found that the head had in the interim ascended an inch or two above the brim. By its side was a hand, ready to present, next to that the placenta, doubled up, and a little farther on was a foot. I at once withdrew the blade of the forceps, and, seizing the foot, turned, which was easily done. During the turning there was a little external hemorrhage. After the delivery of the breech, the head was found to be in an occipito-posterior position, from a pardonable haste in version, and the arms were extended: an unpleasant complication in a contracted pelvis. The arms were with some difficulty brought down, the head remaining at the brim. Morph. sulph., gr. $\frac{1}{4}$, was then given, and at 3.10 A.M., Dr. Leitch having arrived, the forceps were applied, but the disproportion was too great for the head to be de-

livered in a posterior position; neither could I succeed in rotating the head and then applying them. Abandoning the instruments, the head was rotated to an anterior position by pressing the finger against the superior maxilla inside the mouth, the body being simultaneously rotated, after which I pulled down the lower jaw and with moderate traction effected delivery at 3.55 A.M. The child was a male, weighing ten pounds, and of course still-born. The cord was then followed up, and the placenta found in the abdominal cavity, but was easily withdrawn by traction on the cord. I then cautiously explored, and found a rent a little above the junction of the body and neck of the womb, at a point nearly corresponding to the right sacro-iliac symphysis: through it I felt a coil of the small intestines. The body of the womb was firmly contracted, and, being thus pulled away from the uncontracting cervix, made the rent gape somewhat. Notwithstanding all this, the typical physiognomy of shock was still absent, the woman being fully conscious and complaining of excessive pain. At 4.25 A.M. we gave morph. sulph., gr. $\frac{1}{2}$, camphoræ, gr. i, and in an hour began the use of veratrum viride, giving one drop of Norwood's tincture every hour, with morph. sulph., gr. $\frac{3}{8}$, camphoræ, gr. i, every other hour. Her condition remained substantially the same, with little relief from pain except in short doses (the pulse 132 and weak), until 4 P.M., when the pulse was full and inflammatory, but still 132 to the minute. The veratrum was reduced to a drop every other hour. There was scarcely any external flow, but on shifting her from the right side, on which she had hitherto lain, to the left, at her urgent request, a gurgling sound was heard within the abdomen, highly suggestive of effused blood and plenty of it. By 8 P.M. the bowels were much distended and tympanitic; pulse 140; pain not quite so severe; skin moist and hot. Treatment continued, and anointed the bowels with turpentine diluted one-half with lard, reapplying the binder, as it seemed to make her a little less uncomfortable.

September 24.—Made water freely this morning. General condition the same. She was again shifted to the right side. At 11 A.M. called in Dr. D. B. Woods, of Warren, who introduced a drainage-tube into the abdominal cavity, and in the course of the day some thick fluid blood passed through it, not exceeding an ounce. An attempt had been made to place her on her back, but the position was unbearable and caused her to vomit. At 6.30 P.M. the bowels were a little less swollen; pulse 118; not so much pain. The next dose of veratrum was omitted, and it was afterwards reduced to gr. $\frac{3}{4}$ every hour. Thirst was throughout prominent. She was again placed on her left side. These shiftings were followed by an interval of comparative ease. During the last one the drainage-tube escaped, and, as on her left side it could do no good, it was not introduced till September 25, 8 A.M., when she was again on the right side. At midnight, vomiting began, and she was now unable to retain anything on her stomach. Added acid. carbol., gr. $\frac{3}{8}$, to each dose of veratrum, and bismuth. subnitrat., gr. v, to the morphia and camphor. Morphia placed dry on the tongue was also used, and sinapisms to the epigastrium. From this time medication practically ceased, as the vomiting was persistent and uncontrollable. The fluid ejected was greenish and with little odor. The bowels remained quiescent. Hot cloths were applied to the abdomen, which greatly relieved the pain. By 5 P.M. the features were beginning to look pinched and haggard, the pulse being 124. She survived, however, until 7 A.M. on the 26th. No autopsy could be obtained.

Remarks.—The precise moment of rupture was evidently when the labor-pains were completely abolished and the cramps suddenly began; but it

is not clear whether the placenta became detached immediately. If so, a great deal of blood must have escaped into the abdominal cavity, as the external hemorrhage was slight. In the absence of an autopsy, the precise extent of the rupture is unknown. The suddenness with which the head disappeared from the brim, between the withdrawal of one hand and the substitution of the other, was remarkable. If the second blade could have been applied, the rent would probably have been smaller, but the hemorrhage into the abdominal cavity would have been none the less, and this was undoubtedly the necessarily fatal element in the case. In view of the mortality of this accident, it is a question whether, even after delivery per vias naturales, it would not be justifiable to open the abdomen by an incision and sponge out the effused blood, whose presence is a sure cause of peritonitis, and, by decomposition, of septicæmia. The cause in this case seems to have been premature fatty degeneration of uterine tissue. The pains were throughout comparatively weak, and almost the first attempt at aiding them by voluntary muscular effort resulted in rupture. I was informed that three months before confinement she had had some domestic trouble, during which she fainted, and felt afterwards as if something had given way. The movements of the child, also, became very faint. What this may have been is doubtful. If the rachitic diathesis was an element in the causation, rupture might justly have been expected to occur in former labors; and yet vitality may have been so far impaired that from this very cause the womb was early worn out, so to speak, by frequent use. The influence of rachitis on vitality after the entire cessation of osseous changes is denied very flatly by Parry in his paper published in the *Am. Jour. of the Med. Sciences*, April, 1872, but without the evidence of thorough research that attends the other statements in that valuable paper. It is certainly a debatable question. To sum up: we have here a case of rupture of the uterus occurring after four and a half hours of labor in a multipara with a pelvis deformed by rachitis, followed by death from peritonitis, the first stage of labor having been very short; an obscure history of sudden uterine disturbance three months before; an unusual absence of shock after the rupture, and a subsequent peritonitis in which dorsal decubitus was absent and tenderness of the abdomen slight, as shown by the tolerance of a bandage. The fluid which passed through the drainage-tube most nearly resembled the contents of a cephalæmatoma, which are generally described as loosely coagulated blood. Much of this might have been removed by washing out the abdominal cavity; but the heroic appearance of this procedure, coupled with the almost certainty that equally mischievous clots of large size would still remain, resulted in mere expectancy; and, indeed, decided measures of treatment, to which alone we may look for good in these cases, are likely to be still set aside until the almost millennial day when the physician's hands shall be no longer tied by the demands of popular prejudice.

October, 1874.

TWO CASES OF MYDRIASIS WITH PARALYSIS OF ACCOMMODATION TREATED BY ELECTRICITY.

OCCURRING IN THE PRACTICE OF DR. C. R. AGNEW.

REPORTED BY DR. D. WEBSTER,

New York.

CASE I.—Mrs. G. W. J., æt. 31, married, presented herself for treatment February 17, 1874. She has had no children or miscarriages; has had womb-disease for the last ten years, which her family physician calls ulceration and enlargement. She has been very nervous for years, and has frequent rheumatic pains beneath her shoulder-blades,—worse on the right side. For four or five months she has been subject to severe headaches, more especially in the left temple. A month ago she noticed, for the first time, a blur in reading the newspaper. No history of specific disease.

Examination.—The pupil of the left eye is widely dilated; media and fundus normal; R. E. $V = \frac{2}{30}$; Hm. $\frac{1}{8}$; L. E. $V = \frac{2}{30}$, with $+\frac{1}{30}$. With the left eye she reads Jaeger No. 19, and picks out letters in Jaeger No. 17 at 18"; with $+\frac{1}{11}$ reads Jaeger No. 1 at 12".

The patient states that she has been salivated; that she has taken potash, and that she is now taking elixer. phos. cal. c. strychnia.

I commenced at once the application of electricity—interrupted current. The instrument used was Dr. Jerome Kidder's improved tip-battery. I commenced with the weakest current, applying it at first for only ten minutes. The current was gradually increased in strength until the connections were made at the posts marked A and D, and the tube withdrawn from the helix about an inch and a half, which seemed to indicate the maximum strength that the patient could comfortably bear. The length of time of each sitting was gradually increased until half an hour was reached, and so continued. The positive electrode was generally applied to the closed eyelids, by means of a moistened sponge, while the negative was held in the hand. The electricity was felt much more in the hand than in the eye, unless the sponge happened to be pressed against the supra-orbital or infra-orbital nerve. The application was repeated daily, except Sundays. No improvement was appreciable until after the eighth application, when she read Jaeger No. 15 readily; and now her power of accommodation began to be steadily restored, until, after the twenty-first application, she read Jaeger No. 1 quite easily at 7". Her pupil became gradually smaller and more responsive to light, until it is now very nearly normal. The patient was discharged, cured, after the twenty-third application.

She remarked that the rheumatic pains beneath her shoulder-blades had entirely disappeared under the treatment.

Case II.—S. L. W., æt. 27, clerk; first seen January 9, 1874. Four or five days ago found he could not read without closing his left eye, and upon looking into a mirror observed that his left pupil was larger than its fellow. For two days has had several attacks of severe headache. Has had gonorrhœa with bubo for the last month, accompanied by much pain in the perineum. Has had two sores on his penis: the first a year ago, which his doctor said was not a chancre; the other three or four weeks ago, which was caused by an accidental application of tincture of iodine. Gives no history of general syphilis. $V = \frac{2}{30}$ each eye; Em. Fundus and media normal. Unable to read any except the coarsest print, with left eye.

He was ordered to avoid tobacco and alcohol; his habits were regulated, and he was placed on iodide of potassium and tincture of nux vomica. He was kept on this treatment about a month without benefit to his

eye. He was under treatment by an expert for stricture of the urethra at the same time. All medication was stopped, and he was now placed upon electricity, as in Case I. After the ninth application he read Jaeger No. 6 at one foot; after the fourteenth application he read Jaeger No. 1 at 8", but the dilatation of the pupil remained unchanged. The applications were kept up at irregular intervals, so that he had had thirty sittings in all on the 25th of March, when he was dismissed, with still a perceptible difference in the size of his pupils, as also in their mobility. Hypodermic injections of strychnia had been tried in this case, before electricity was resorted to.

It seems worthy of note that in this case the function of the ciliary muscle was fully restored for several days before the sphincter iridis showed any indications of returning strength, while in Case I. the functions of both muscles were restored simultaneously.

ESMARCH'S BANDAGE IN SHOULDER-JOINT AMPUTATION.

BY W. H. MYERS, M.D.,
Fort Wayne, Ind.

RECENTLY, in amputation at the shoulder-joint, I used Esmarch's elastic bandage, as I thought, to a very good purpose. Before the operation I had the arm elevated and the bandage firmly applied, allowing no pressure at the time over the subclavian artery until the bandage was carried up as high into the axilla as possible. Pressure upon the subclavian artery was then applied by an assistant, the bandages removed, and the result was an almost bloodless operation.

PERSISTENT VOMITING OF PREGNANCY—INDUCED ABORTION—RECOVERY.

BY FRANCIS L. HAYNES, M.D.

MRS. C., aged 39, was delivered of her eleventh child January 3, 1873. Shortly afterwards, she was treated for uterine disease—cervical endometritis and a large ulceration of the os—by applications of fuming nitric acid.

On March 1, 1874, a final examination was made: the parts were entirely cicatrized; the canal of the cervix was so contracted that it would barely admit a probe.

Mrs. C. enjoyed perfect health from this time until the latter part of July, when she became aware of the existence of pregnancy from the disappearance of the menstrual flow and the presence of nausea and vomiting, which had been very troublesome accompaniments of her previous pregnancies. The vomiting increasing, medical aid was obtained on August 28. The following drugs were administered in various combinations: quinia, bismuth, cerium oxalat. (in from two- to ten-grain doses), sodium bicarb., potas. bromid., prussic acid, calomel, creasote, and morphia hypodermically, alone and combined with atropia. Nutritious enemata were employed during the entire course of her sickness: without them I am sure she would have succumbed.

In spite of physic, the vomiting became more and more troublesome, until nothing whatever could be retained by the stomach. The patient became very feeble, and assumed a cachectic appearance. The pulse gradually grew weaker and increased in frequency.

On September 10, Dr. Houghton visited the patient, and agreed with me in the propriety of inducing abor-

tion. On the succeeding day a speculum was introduced. No orifice in the uterine neck could be seen, merely a minute depression; into this a probe was forced; its circumference was then nipped by a bistoury; the dressing-forceps were introduced and dilatation practised. This operation was followed by slight alleviation of the vomiting, which, however, soon resumed its usual violence. The patient grew feebler; wandering delirium came on; the pulse rose to 136. On the 15th and 16th she had several severe rigors. To relieve this symptom she was ordered five grains of quinine every two hours by enema.

On the 19th, a sponge-tent was introduced into the cervix uteri; the next morning, Barnes's dilator was applied, and immediately afterwards the uterus was emptied of two fetuses (about six weeks old) and their involucre, by means of the finger and dressing-forceps. To prevent hemorrhage (for there was no contraction whatever of the uterus, either tonic or intermittent), a tampon was applied.

The patient vomited but three times after the abortion, and made a good, though slow, recovery.

FOREIGN BODY IN THE EAR FOR TEN YEARS.

BY CHARLES SHAFFNER, M.D.,
Assistant Physician to the Eye and Ear Institute.

A W., 11 years old, came under our notice September 30. Her mother said that when she was about a year old and living in Ireland, near Londonderry, she was playing out of doors under the care of older children, when one of them brought her in and said she had put a hawthorn stone ("haythorn stone") in her ear. The mother immediately tried to pick it out with a large pin, but not being successful, and it not causing any complaint from the child, she forgot all about it for the time.

It caused very little trouble indeed; occasionally, a slight attack of otalgia, some little tinnitus, described as a low buzzing, and no discharge whatever.

On examination with the speculum, the seed was found against the membrana tympani, surrounded with healthy cerumen. The syringe and Toynbee's forceps assisted us in soon bringing it away, when it was found to be a stony, hard, black seed, about the size and shape of a pea, and was no doubt the seed of a hawthorn tree (*Cratægus oxyacantha*), such as are grown in hedges in Ireland.

The membrana tympani was then carefully examined, and nothing abnormal was discovered but some little congestion,—a very little more than syringing the ear with warm water would naturally produce.

It seems very strange that a foreign body should be so long in such a position without causing severe inflammation and ulceration.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF J. FORSYTH MEIGS, M.D.

Reported by FRANK WOODBURY, M.D.

A CASE OF ABSENT UTERUS AND VAGINA, WITH RUDIMENTARY OVARIES (?), WITH REGULARLY RECURRING MENSTRUAL MOLIMEN.

THE following are the notes of an interesting case admitted to the Women's Medical Ward on the 14th of August, 1873, during the service of Dr. J. F. Meigs, by whose permission it is reported.

The patient was 22 years of age, born in Germany, and was sent to the hospital with the following history: She had been only four months in America, and had been doing house-work until she was taken sick. One month before admission she caught cold from exposure and overwork, but was able to perform her duties until five days previous, when she was attacked by a very troublesome diarrhoea, preceded by nausea and vomiting, and accompanied by headache, constant fever, and anorexia. The case was pronounced by her attending physician to be one of typhoid fever, and her friends were advised to bring her to the hospital.

There was no fever present when she was admitted, although her pulse was accelerated and it was said that she had been delirious the night before. The tongue was moist, and had a light coating, with red tip and edges. The abdomen was not tympanitic, nor were there any rose-spots visible. The patient seemed well nourished and in good condition, and did not appear to be very ill. She stated that she suffered occasional attacks of severe pain in the right chest and epigastrium. The diarrhoea had become less troublesome than before, but the headache still continued.

The lungs and heart were found to be normal, and the liver and spleen not enlarged.

As the symptoms were not urgent, she was ordered rest in bed, with a light diet, potassii bromid., gr. xx, at night, and a sinapism to the chest if the pain returned.

On the next day the urine was examined, and found to be about the normal quantity and color, neutral in reaction, sp. grav. 1020, and to contain no albumen. The bowels were open once or twice daily, and the fever had disappeared, except a slight flush in the morning following chilly sensations. She was put upon the use of quiniæ sulph., gr. xii, daily, for a week, when it was reduced to gr. vi, and continued after the chills had gone, as a tonic.

The lady with whom she had been living now communicated the fact that although the girl was quite sick every four weeks, she had never had any menstrual discharge, and requested that she might be examined and measures taken for her relief. The patient, who was quite intelligent, said that she came to America in order to learn the language, with the intention of returning at the end of a year and resuming her occupation as teacher in a school kept by her father in North Germany. Her parents were healthy, and she was not aware that a tendency to any special disease or deformity existed in her family. She stated that for more than seven years she had suffered from physical disturbance every four weeks, often being obliged to keep her bed at these periods, but never had any vaginal discharge; a fact to which she did not attach much importance, as another member of her family, an aunt, did not menstruate until after marriage, at twenty-eight years of age. She frequently had epistaxis at these times, which greatly relieved her headache and pelvic distress. On one occasion the family physician ordered an application of leeches to her thighs and abdomen, from which she experienced such relief that she subsequently applied them several times of her own accord. She refused to permit a physical examination while at home, and her physician recommended a visit to America, thinking that a change of climate might encourage the establishment of the function.

In making a digital examination an abnormal condition of the vagina was found. The surrounding parts showed nothing unusual, but the vagina was a cul-de-sac of scarcely an inch in depth.

The next day a thorough examination was made by Dr. Meigs, with the patient under the influence of ether, with the following results:

The patient's frame was large and well developed, and her face full and florid. The mammae were of good size; hips broad. The external parts appeared

rather flattened, but were moderately well supplied by the capilli veneris. The clitoris was of normal size, and the internal labia as usual. By introducing the finger into the rectum, it was found, by the aid of a catheter in the bladder, that the vagina terminated abruptly at the position before indicated, and that no uterus or rudiment of one existed. With two fingers in the bowel a fold of membrane, or band of fibrous tissue, could be felt running across the pelvis, high up, as if it were the broad ligament. There was nothing to represent the uterus, as there was not even a perceptible thickening of the membrane in the centre, but far to the right was found a small, uncertain, movable, local thickening, which gave some resistance, and seemed like a flattened, fibroid body, resembling in size and shape the fibro-cartilage of a large oyster. No corresponding body could be discovered on the left side.

The following day Drs. Ellwood Wilson, James H. Hutchinson, and James C. Wilson were invited to examine the case with Dr. Meigs. Some of the gentlemen thought that the above-mentioned thickening was a rudimentary ovary, and Dr. Ellwood Wilson was under the impression that he felt a similar, but smaller, one on the left side; otherwise they corroborated the former examination.

The patient remained under observation nearly seven weeks, during which she showed marked hysterical symptoms, losing consciousness on several occasions. She had one of her menstrual periods while in the hospital, accompanied by headache, cardiac and lumbar pain, flushed face, etc., but the pulse remained full and slow; she was relieved by the application of leeches to the groin.

The history of the patient since puberty is interesting, as showing the tendency that prevailed to plethora and recurring hemorrhage (*vicarious menstruation?*). The following is an account written by herself at the request of the resident, which was thought worth translating:

"The first half of my fourteenth year was quite free from sickness; then for three or four weeks flushes of heat occurred every evening, and following this bleeding at the nose and abdominal pains (*leibschmerzen*) came on quite regularly *every four weeks*, which still continue. In my fifteenth year I was troubled very much with swollen face and pains in the eyes, and had a severe attack of measles. The next year I had asthma, following the measles, and my limbs were swollen, which still continued during my seventeenth year, but to a greater degree. At this time I commenced to be troubled with rush of blood to the head, so that often my eyes became bloodshot and vision would be temporarily lost. In the succeeding year the swelling in my limbs and feet was so great that I was unable to walk for three months. At this time the doctor applied leeches, but took so much blood that I became weak and had a sense of exhaustion. In my nineteenth year I had chills and fever occasionally quite severely, and had a serious attack of pneumonia. The next year jaundice occurred twice; after the second attack, which was severe, I had an attack of *spitting of blood*, lasting about three weeks. This was followed by anæmia, which continued until my twenty-second (the present) year, when I had two more attacks of pneumonia. . . . When coming on the steamer the second attack occurred, in addition to which I suffered very much from sea-sickness. . . ."

B. D.

To this history may be added the item that the patient was markedly hysterical, having several unmistakable attacks while at the hospital.

It would seem, from what questions could be addressed to her on the subject, that in her sentiments towards the opposite sex she was like other girls of her age.

PHILADELPHIA MEDICAL TIMES.

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EDITORIAL.

MEDICAL EDUCATION.

ENCOURAGED by the old saw, A continual dropping will wear away a stone, at the risk of wearying our readers we to-day call attention to the Indiana Medical College as an example of the inevitable results of our American system of medical instruction. In the recent announcement of this college it is stated,—

“The Indiana Medical College was organized in 1869, to meet an educational necessity long felt by the profession of the State. It was formed under a resolution of the Academy of Medicine of this city, and received the unqualified endorsement of the State Medical Society.”

At present the college forms the medical department of the State University, and has, therefore, every endorsement of respectability, so far, at least, as the outer world can judge. Yet tuition in it is offered *free*, and attendance only on a single lecture course of about four months' duration is required for graduation. The session opens October 12, and closes on the 26th of February; whilst the official announcement expressly states, “Four years of reputable practice are considered equivalent to one course of lectures.”

We note these facts not to complain of them, but simply as beacon-lights; not because the profession in this portion of the country is directly responsible for them, or able to change them, but because they are the legitimate and inevitable fruits of that system of medical education which was fastened upon

the United States by the founders of the Medical Department of the University of Pennsylvania,—a system still supported by the example, if not the precept, of every medical teacher in the East, outside of Boston. We cannot control others, but we can exercise over them the powerful, though it may be unseen, influence of example.

The Medical Department of the University of Pennsylvania was modelled upon that of the Edinburgh University, but in an evil hour the plan was departed from, in that the professor was made a dependent not of the trustees but of the students; receiving his emoluments not from the University but from the class.

Since the University of Pennsylvania has been the foster-mother of the present system, would that it had celebrated its centennial anniversary by stepping up to a higher and nobler plane! It has lost, however, the honor of being the first institution to reform: if it hesitates much longer, it may have the shame of being among the last.

IN what we have said in the past, or may say in the future, on the subject of medical education, we desire it to be distinctly understood that no disparagement is intended of the medical schools of this city, except in regard to the length and amount of study required of the student and the system of granting diplomas.

The corps of medical teachers in this city, public and private, is to-day probably equal to any in the world,—certainly to any on this continent. Medical, surgical, and obstetrical clinicians of ample experience and the highest ability, specialists of the most thorough culture, medical chemists and toxicologists of wide renown, anatomists known wherever science is cultivated, microscopists of skill which may challenge the world, impressive and polished lecturers—we are proud to hold a humble position among such a body of men, and only express our honest conviction when we state that never in the history of our city has so much talent clustered around the medical schools.

The clinical opportunities afforded are also infinitely beyond what they ever have been in the past, and are sufficient to satiate the most avaricious. In West Philadelphia over eleven hundred hospital-beds within five minutes' walk of one another, and very large special dispensary services—for general medicine and surgery, for diseases of the nervous system, of women, of the skin, of the ear, and of the eye—afford material, embarrassing in its richness, for fourteen free clinical lectures a week, and as many private courses as students can be found to pay for.

In the heart of the city, not more than two miles from this medical centre, and with passenger-cars passing to and fro every three minutes, are the large and popular general and special clinics of the Jefferson Medical College, and in close proximity to these the four weekly free clinical lectures of the Pennsylvania Hospital, the oldest institution of the kind in America, and surgically one of the most active hospitals in the world. In the concentration of clinical material and the consequent saving of the time of the student, our city is almost unrivalled, and leaves nothing to be desired.

We find no fault with these facilities, because there is no room for fault-finding. With the finest medical hall on this continent, if not in the world, with progressive teachers and ample clinical and anatomical material, our city offers any one who is desirous of learning every opportunity for the study of the science and the art of medicine, except it be in the one deficiency of a well-appointed physiological laboratory. It is not of these things we complain, but candor forces us to acknowledge with sorrow that any student who does not want so much to learn as to get the title of M.D. and the right to practise, will find in the Philadelphia diplomas the maximum of respectability, with almost a minimum of necessary attainments; not that the standard here is lower than elsewhere,—it is certainly higher than in the smaller schools,—but because it is of very necessity the same or nearly the same as in our neighboring and competing cities. Let us hope that the day is not far distant when a Philadelphia medical diploma will be proof that its possessor is a master in his art, and not, as he may be at present, a mere medical ignoramus.

THOSE of our readers who are subscribers to the *London Practitioner* will be glad to hear that Dr. T. Lauder Brunton is to be the successor of Dr. Anstie. To our thinking the choice is most judicious. We believe Dr. Brunton to be, intellectually, one of the foremost of the London profession.

DR. ANSTIE is stated to have left a family with very slender resources, and measures have been taken to raise a memorial fund, which it is proposed shall be especially applied to the completion of his son's education, the father's plan for which the family are not in a pecuniary condition to carry out.

CHEMICAL and histological laboratories are about being erected in connection with La Charité, Paris, at a cost of over twenty thousand dollars.

A WRITER (*Medical Press and Circular*) styling himself "Cause and Effect" has discovered that abortion is so universally practised in the United States, and "safes" or similar devices used in France, because the law of entail does not exist in those benighted countries.

It is stated that there are a number of "lady students" at the Ecole de Médecine, and that they are on the same footing as the other students.

ROKITANSKY is now seventy years old, but he has been requested by an especial act to continue his lectures on Pathological Anatomy.

DR. WILLIAM RUTHERFORD has been elected Professor of Physiology in the University of Edinburgh.

LEADING ARTICLES.

SECRET POISONING.

A MAN named Moreau, who was accused of having poisoned two wives in less than ten months, by repeated doses of blue vitriol, has been recently tried in France, and the marked contrast between the thorough way in which the medico-legal points were worked up, and the loose manner in which similar subjects have been dealt with in some late trials in this country, warrant a somewhat extended account of the case. Moreau began his education with a view of taking holy orders, but, owing to the partiality for female society which he exhibited, it was soon found that he was unfitted for that vocation. He then went to Paris, where he acquired some knowledge of chemistry, but did not obtain a diploma; and, after marrying a girl with whom he had been living, purchased an herbalist's shop. He became embarrassed in his circumstances, and then, as the prosecution alleged, conceived the idea of poisoning his wife so that he would be free to marry a well-to-do woman, named Lagneau. His first wife died, and he in a short time married the other woman, who was perfectly healthy, and about thirty years of age. She in her turn died not long after her marriage, with symptoms almost entirely similar to those which attended the death of her predecessor. There were many circumstances concerning the deaths of the two women which were calculated to awaken suspicion as to the cause of their death, and the bodies were exhumed and found to contain considerable quantities of copper. Moreau had nursed both of the women during their illness, and had given them their food and medicine, throwing away any which they did not take. He had not summoned the physician who had attended his first wife to care for his second, and to neither of them had opportunity been given to inquire into the cause of

the symptoms under which their patients were suffering.

The second wife, indeed, had expressed the belief that her husband had poisoned her, but he managed to induce her attendant to certify that her death was due to "diphtherial quinsy." The evidence which was brought out at the trial was entirely conclusive, and the prisoner was convicted and sentenced to death.

Dr. Bergeron, who is well known as a medical expert, was directed to exhume the bodies of the two women and examine them, and state whether the conditions which he found could be accounted for by any known disease, or whether they corresponded to those which would be found after the administration of poisonous doses of the salts of copper. The bodies were accordingly dug up, and the autopsies performed at the Morgue of St. Denis. The viscera were removed, with the observance of all possible precautions to prevent anything finding its way into them, and placed in receptacles which were entirely new and clean.

The organs of the first victim were in a wonderfully good state of preservation; they were dry, like parchment, and covered with mould. The condition of the stomach was such that an incision could be made in it as if death had taken place but a few days previously. This organ presented no excoriation nor ulcer, so that the assertion that had been made that death had been caused by some affection of that organ was proved to be without foundation.

The pharynx of the second woman presented no evidence whatever of angina. The coffins were tight, and it was not possible that any copper could have made its way into them and thus have affected the corpses. The most careful tests of the presence of copper in the internal organs were made, and the presence of the metal was established beyond a doubt by bringing it into court. In order to refute the possible objection that copper might be present in all bodies, no less than fourteen bodies were examined, and their viscera tested for the presence of that metal. In two of these cases copper was found to exist in the liver, but in infinitesimal amount, since scarcely one milligramme was detected. The question was then settled, and Bergeron expressed his conviction that the copper found in the intestines of these two women had been administered to them, and that they had died in consequence of its poisonous effects. He further administered the sulphate of copper to two dogs with their food, and at their death found in their livers approximately the same amount of copper that existed in the livers of the two murdered women.

The chemist, M. Lhôte, who had performed these investigations in conjunction with Dr. Bergeron, gave his evidence to the same effect, but in more precise and mathematical language. He testified that in the body of the first woman he had detected one hundred and twenty milligrammes of copper, and in that of the second eighty-four milligrammes of the same metal, and confirmed the statement that in the fourteen bodies which had been tested for copper, it had been found in but two of them, and in quantities of not more than one milligramme.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPT. 23, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

OVARIAN tumor of the left ovary, and a tubal dropsy of the right Fallopian tube.

Dr. H. LENOX HODGE exhibited the specimen, which was removed at the Presbyterian Hospital from a woman who had suffered from ovarian dropsy for about two years and a half.

She had been tapped eight times by different practitioners, and was admitted into the hospital three weeks after the last tapping. She died on the second day after her admission, in a faint upon rising to have a stool.

Upon making the examination, the uterus was found lying in front of the tumor, flattened and extending three-fourths of the distance to the umbilicus. The uterus was also elongated so as to measure six inches. The tumor extended to the margins of the ribs, and consisted of one large cyst, with a few small ones in the exterior portions of the wall. The large cyst was filled with a thick purulent fluid, with numerous large flakes of fibrinous deposit. Upon its interior were a number of inflammatory growths. The smaller cyst had not suppurated. This tumor was on the left side. The right ovary was healthy, and exhibited a recent corpus luteum. The right Fallopian tube was much elongated, tortuous, and its diameter enlarged, especially towards its fimbriated extremity. This extremity extended far beyond the ovary, and was not in direct connection with it. At the extremity of the tube there was a sac filled with a dark-colored fluid, containing a small quantity of albumen, and communicating freely with and constituting part of the Fallopian tube. The fluid could not be forced along the narrow part of the tube into the uterus.

There was recent local peritonitis, and there was cirrhosis of the liver.

The special points of interest in this case to which Dr. H. directed the attention of the Society were inflammation of an ovarian cyst following tapping; the existence of distinct tubal dropsy; the microscopical and chemical characteristics of ovarian and tubal dropsies.

Specimens of these fluids were sent to Dr. Richardson and to the special committee of this Society of which Dr. Tyson is Chairman.

Dr. JOSEPH G. RICHARDSON said he could not add much to Dr. Hodge's statement. He had found the cells of Dr. Drysdale in the first cyst and in the cyst containing purulent fluid. In the third fluid, decomposition had so far advanced that he was unable to make a satisfactory examination. He had found cells resembling them, but he could not be confident of their characters, because the field was so crowded with bacteria.

Dr. JAMES TYSON said that he had examined, in connection with the Committee on the "Ovarian Cell," three fluids sent by Dr. Hodge said to be of ovarian origin. In one the cell of Dr. Drysdale was clearly present, also in the second, which was pronounced to be pus, while in the third decomposition was so advanced as to admit of no reliable examination.

Dr. RICHARDSON said that while he had treated the cells with acetic acid, he had not applied ether.

Dr. TYSON said that the committee had found the application of ether to the fluids under the microscope so difficult and unreliable, in consequence of its extreme volatility, that they had ceased to attempt to use it in the examination of fluids sent to them.

Dr. RICHARDSON said that during the addition of ether

to the cells on a slide in his presence he had not been fully satisfied that the desired contact took place.

The specimen was referred to a special committee for report, consisting of Drs. Mears, Hodge, and Parry.

Dr. HODGE stated that he joined heartily in the request that the specimen be referred to a special committee for examination, and in reference to Dr. Mears's suggestion that it might be a cyst of the broad ligament which had undergone suppuration, he would call attention to the following facts: The anatomical relations as seen at the post-mortem indicated that it was ovarian. The contents of a small cyst in the wall of the large cyst were highly albuminous.

She had been tapped seven or eight times. Three of these tapplings, before suppuration had begun, she described minutely, stating that the fluid was of a greenish color, and coagulated upon boiling, instead of being of the thin, clear, colorless character, like spring-water, so strikingly peculiar to cysts of the broad ligament.

Dr. H. LENOX HODGE also exhibited an ovarian tumor removed by ovariectomy. The operation was performed this morning. The patient is 29 years of age, and has suffered from the tumor for about eighteen months. She was tapped last May, and one large cyst emptied. This was followed by partial relief. During the summer the fluid reaccumulated, and before the operation she measured two inches more around the abdomen than she did before the tapping.

The tumor is of the multilocular form, and belongs to the right ovary. The left ovary was healthy. On account of the thick character of the contents of many of the cysts, and the large amount of fibrous structure, it was requisite to make the abdominal incision ten inches long, extending about one inch above the umbilicus. The patient has reacted well, has no pain, and rests very comfortably this evening.

Congenital imperforation of the duodenum and absence of the gall-bladder.

Dr. RICHARD A. CLEEMANN presented the specimens, and read the following history: "These specimens of morbid anatomy represent arrest of development of the duodenum and of the gall-bladder. They were removed, with the assistance of Dr. C. B. Nancrede, at the necropsy of a female infant, made thirty hours after death. The body was emaciated; the cadaveric rigidity well marked. On opening the abdomen, the *stomach* and what proved to be a portion of the *duodenum* greatly distended were seen, of a pearly whitish appearance, extending quite across from side to side and deep down in that cavity. The contents of this double pouch, to which the stomach contributed about two-thirds, consisted, besides gases, of a thick, blackish-green liquid, resembling meconium: after these were removed the capacity of the whole sac for water was seven and a half fluidounces. Examining the interior of the duodenal portion, a papilla with a central depression is seen, situated posteriorly and near the lower end, but no outlet. A thin strip of tissue has been left, uniting the external face of this little eminence with a narrow blind pouch, which was continuous with the *jejunum*. The latter and the rest of the intestinal canal were contracted, and presented nothing abnormal. The anus, vagina, and urethra were pervious and well formed; the bladder empty. On inspecting the liver, the depression between the right and square lobes is found to be without the gall-bladder, a thin cord of tissue, somewhat expanded anteriorly, occupying this position. Nothing further of special interest was observed in the contents of the abdominal and pelvic cavities; those of the thorax and cranium were not examined.

"The subject of these imperfections seemed, at birth, to be in perfectly good condition, and had in due time alvine and urinary evacuations. However, in the course of the first day, after something fed her by the

nurse, vomiting began, and persisted till the fifth day, when death occurred from exhaustion. The matters vomited at first looked like what had been ingested, but subsequent ejections had a peculiar yellow color, and were at the close quite dark, resembling the post-mortem contents of the stomach, and had a very disagreeable odor. Along with the gastric disturbance, restlessness soon began, and then evidences of pain manifested themselves, which increased till the little patient seemed in an agony of suffering. She ceased to micturate after the second day, but had motions from the bowels to the end.

"The hour-glass-shaped pouch formed by the stomach and part of the duodenum, the much dilated pylorus like a firm ring, making but a loose constriction, had a very deceptive appearance; especially before the immersion of the specimen in alcohol, in which it has contracted unequally. It looked as if the stomach had reverted to the sacculated condition which occurs in some lower animals, and which, indeed, has sometimes been found in infants. In two instances of congenital stricture of the duodenum, reported in the Transactions of the Pathological Society of London (the only cases at all similar to this described there), the shape of the conjoined stomach and part of the duodenum was precisely the same. On the first of these, furnished by Dr. Wilks, the infant died on the second day, fourteen hours after vomiting began, and there were no evacuations from the rectum, the bowels being found distended with meconium at the necropsy. The stricture occurred just above the entrance of the common duct.* In the other case, contributed by Dr. George Buchanan, the child lived eighteen months, presenting a curious succession of symptoms; the difficulty was caused by a slightly oblique septum, with a perforation through the centre only a line in diameter; between the walls of this diaphragm ran the bile-duct.†

"Congenital imperforation in the course of the intestinal canal is much more rare than at its extremities; a fact easily explained by the greater simplicity of development of the walls of the tube than of its outlets. On account of this rarity, little is to be found written on the subject in systematic medical works; but the younger St. Hilaire treats generally concerning it as follows: 'It (the alimentary canal) is sometimes imperfect in one or several regions, principally in its terminal portions, but never throughout its whole length. The imperforation results at one time from a membrane placed transversely, at another from the approach and intimate union of the intestinal walls so that the form of the organ changes from that of a canal to that of a solid cord, and again, finally, from the termination of the intestine in a *cul-de-sac*.‡ Occurring in the duodenum, as in this case, the condition is of course necessarily fatal.

Absence of the gall-bladder, on the other hand, is not very uncommon, and a compensatory dilatation developing itself in the course of the hepatic duct or in the substance of the liver itself is generally found;§ its non-existence is quite compatible with prolonged life. The conjunction of the two anomalies is, however, very interesting in view of the functional and local relations of the defective organs, to explain which it may be supposed either—following Sir James Paget in the theory which makes one organ in its development serve the purpose of an excretion in the production of another||—that the imperforate duodenum determined the absence of the gall-bladder, or that the close juxtaposition of certain portions of the two organs exposed them to the direct

* Trans. Path. Soc. of London, vol. xii. p. 101.

† Ibid., p. 121.

‡ Histoire des Anom. de l'Organisation. Bruxelles, 1837, tome i. p. 376.

§ Sharpey & Quain's Human Anatomy, by Leidy, first Amer. edit., vol. ii. p. 401.

|| Lectures on Surgical Pathology, third London edit., p. 19.

action of some local disturbing cause. To know what was the condition of the hepatic duct would be useful in this connection, but, unfortunately, the specimen was removed too hurriedly to admit of its dissection.

"As at the necropsy no local condition, such as an adventitious band, was discovered to account for the anomalies, so, with the same negative result, nothing was elicited in the history of the mother's pregnancy to warrant their reference to inheritance, mechanical disturbance, or profound mental impression—the three principal supposed agents in the arrest of development."

The specimens were referred to a special committee for report and drawing, consisting of Drs. Cleemann and John M. Keating.

Two specimens of intestines from cases of typhoid fever.

The PRESIDENT presented the specimens, of which one showed the lower portion of the ileum, with marked enlargement of the glands of Peyer and of the solitary follicles. In a few spots superficial ulceration had appeared. The walls of the bowel were somewhat thickened and too vascular; and there were evidences of general peritonitis, with production of pus and yellowish lymph. The spleen was enlarged; the mesenteric glands enlarged and slightly softened.

The specimens came from a child of four years, who died on the eighth day, of a violent attack of typhoid fever. The early symptoms were obscure and undecided, consisting only of irregular feverishness and failure of strength and appetite. Convulsions occurred on the fifth and sixth days, and the little patient remained subsequently in a state of stupor. The abdomen was much distended, and was evidently the seat of pain. There was no diarrhoea; but when stools were procured by laxatives, they were thin and yellowish.

No cause for the severe peritonitis could be found, as ulceration of the glands of Peyer had in no instance extended deeply enough to cause inflammation of the serous membrane; and there certainly had been no perforation. It is probable, therefore, that it was due to the septic poison of the disease, as is seen in pyæmia, erysipelas, etc. No special source of infection could be discovered at the place where the disease had originated.

Dr. JOHN S. PARRY asked Dr. Pepper whether there had been any temperature-records kept; whether the back had been examined for spots, and whether the stools were characteristic of typhoid fever.

Dr. PEPPER replied that no temperature-record had been kept; that the back had been carefully examined, and that some of the stools were the yellow ochrey stools characteristic of typhoid fever.

Dr. PARRY had seen a number of cases of typhoid fever in children, the youngest being between three and four months old. In this instance there were convulsions, and the child died comatose. There was no peritonitis, but before death the temperature was 109° in the axilla. He had noticed that when the eruption was absent on the abdomen it was sometimes abundant on the back and buttocks. He had always attached great importance to the characteristic alvine discharges after having given a purgative. Further, he was unable to recall many cases of epistaxis, never having seen a severe case in a young child, excepting once, and that was a case of relapsing fever, in which the nares had to be plugged to arrest the hemorrhage.

Dr. PEPPER regretted much that the case was without temperature-observations. It had perhaps happened to every one to notice the great irregularity and obscurity in the symptoms of typhoid fever in children. It is so with regard to epistaxis, the nervous symptoms, and the bronchial complication, which may be entirely absent or attain the degree of a pneumonia; while the

body may be examined from head to foot without finding a trace of eruption, and yet the course of the temperature and the attendant symptoms make the presence of typhoid fever almost a matter of positive demonstration. With regard to the bowels, he could not speak as positively as Dr. Parry. When loose, yellowish stools are present, they are doubtless of great diagnostic value; but doubtless members will recall cases where the bowels are quiet, and where moderate laxatives are borne without the occurrence of the loose discharges, at any rate until too late a period to be of service in diagnosis. The variations in the temperature are so marked and so characteristic as to have secured the name of infantile remittent.

When Dr. Pepper first saw the child it was in convulsions, and it was only by the most careful examination that the history of the case was elaborated. He found that there was chilliness, coldness of the hands and feet, with occasional febrile movement for four or five days previous. Strong purgatives had been administered at the beginning, but there had been no active purgation in consequence, and there was no evidence of irritation sufficient from these purgatives to have produced peritonitis. It is probable, however, that it was the peritonitis which gave rise to the grave symptoms, while there was not sufficient time for the bowel-affection to have progressed to perforation; so that the origin of the peritonitis was constitutional, due to the condition of the blood.

There were open cess-pools in the boarding-house where the family were living, but examination failed to find a sufficient degree of foulness to justify the idea of absorption. There were a considerable number of inmates in the house, but no other case occurred during the summer.

Dr. RICHARDSON said that it had occurred to him that it might be of importance to examine the pus of peritonitis, with a view to finding starch-corpuscles and other ingesta, which would be almost sure to be present after perforation of the intestine had occurred.

The second specimen exhibited extreme disease of the solitary glands and patches of Peyer in the ileum, removed from a man twenty-eight years of age, who died in the University Hospital on the twenty-third day of an attack of typhoid fever. He had received no medical treatment until his admission on the twentieth day of the disease, and for four days before that time had been almost without food or attendance. His prostration was extreme; nervous symptoms mild; slight eruption only; considerable bronchial congestion; abdomen distended and tender, and incessant colliquative diarrhoea. The stools ran away from him almost continuously, and were composed of thin, yellowish liquid. All treatment proved unavailing to check this, and death occurred from exhaustion.

At the autopsy, marked pulmonary congestion and decided enlargement of the spleen were found. The mesenteric glands were much enlarged, reddish, and softened. The small intestine was distended, and its walls were vascular. The intestinal glands were implicated throughout the entire course of the bowel, but the lesions were most profound through the ileum, especially towards its lower end. The solitary glands were greatly enlarged, containing semi-fluid exudation, and in some instances had undergone superficial ulceration. The disease of the patches of Peyer towards the lower end of the ileum was extraordinarily intense. The intestine presented, for a distance of more than a foot, a mass of large, oval ulcers, almost confluent, with thick, rounded edges and irregular fungous surfaces.

A case of rupture of the heart, and post-mortem muscular spasms.

Dr. W. W. KEEN presented the specimen, from Mrs. S., æt. 68, who had been in general poor health for some

years, and a year ago had been cautioned as to exertion on account of a fatty heart.

"September 16, 1874, in the morning not feeling very well, and her hands and feet being cold, as her daughter noticed, she did not rise till near noon. Up to this time she had had two or three attacks of vomiting and retching, not more than usually severe, and apparently caused by taking some medicine, as it followed each dose. At 1 o'clock P.M., having been about the room for some time, she said she felt rather worse and would lie down. In a few moments she sat up in bed, retched again, suddenly threw herself back without a word, and was dead. I was hastily called (I had never seen her before), and after listening over the heart and lungs, feeling for the pulse, finding the pupils immobile, and noting the color and coldness of hands, feet, and face, I pronounced her dead. This was some ten or fifteen minutes after death. About half an hour after death, on going into the room, I noticed with surprise that one of the feet seemed to move under the sheet. To assure myself that it was not possibly the shaking of the floor, I uncovered the feet and hands and sat by the body to watch. The movements were not constant, but were very frequent, probably from two to three times a minute at first to once in three to five minutes towards the end, and they did not cease for over an hour and a half after death. They were sometimes spasmodic movements of the whole foot, but by far the most frequent nearly complete flexion of the great toe alone, or of the first two or three toes, or of all of them together. No other part of the body moved. The movements were so marked that I made one or two subsequent examinations to assure myself of the extinction of life.

"The post-mortem was a very satisfactory proof that they were purely post-mortem phenomena.

" *Sectio cadaveris*, forty-eight hours after death.—The rigor mortis was well marked. The subcutaneous fat about one inch thick. The heart only was examined. About eight or ten ounces of clotted blood and serum were taken out of the pericardium. On removing the heart, the valves were competent, as was proved by testing them with water. The aorta and the mitral valves showed the beginning of atheroma, but only slight. The cause of death was found in a rupture in the walls of the left ventricle. The external orifices were mere slits three-sixteenths and one-eighth of an inch long respectively, one-fourth inch apart, one-half inch from the septum ventriculorum anteriorly, and two inches from the apex, respectively. Internally there was but a single opening, hidden completely by the columnæ carneæ, as shown by two probes passed from the exterior. The walls of the right and left ventricles were three-sixteenths and five-eighths of an inch thick, were not fatty to the eye, and were not at all torn or undermined in any way by the rupture. The heart contained no clots save one, quite small, entangled in the columnæ carneæ at the internal opening, and composed of two parts, one half of white fibrin, the other half of more recently coagulated blood. On microscopical examination, the muscular tissue was found very fatty, the striation being firmly visible, however, at most points, but the fibres everywhere broke up longitudinally into fibrils on the slightest violence. The specimen is in the Museum of the College of Physicians."

Dr. PEPPER said that during the short epidemic of cholera which prevailed in Philadelphia a few years ago, he had made several post-mortem examinations. In some of these cases, post-mortem movements of a very startling character had been observed. In some, the insertion of the knife excited distinct twitching movements. He had once or twice observed movements of the arm in sudden death from acute disease.

Dr. HODGE asked how long after death these movements had been observed.

Dr. PEPPER replied that several hours had sometimes intervened. He also alluded to the recent theory on which they were explained as post-mortem changes in the contractile substance of the muscles themselves.

Dr. WILLIAM DARRACH said that about two years ago a lady, apparently in perfect health, walked out of one apartment into another, and in a few seconds was heard to scream. Her friends, on entering the apartment, found her dead. A rupture of the left ventricle of the heart was found in post-mortem examination, and fatty deposits in the walls of the coronary artery. He asked Dr. Keen whether this vessel had been examined in this instance.

Dr. KEEN replied that it had not.

Cast from a bronchial tube.

Dr. J. SOLIS COHEN exhibited a solid cast from a bronchial tube. The specimen had been expectorated in his presence a few days before by a male office-patient, thirty-four years of age, suffering from pneumonic and laryngeal tuberculosis. It was about two inches in length, tapering towards each end; one end being smoothly rounded, and the other having an impress from the angle of a branching tube. It was one-fourth of an inch in diameter in its thickest portion. Atropia was being successfully administered at the time, for night-sweats.

Dr. R. M. BERTOLET said the cast was composed of exudation corpuscles, some organized fibrin, and a few epithelial scales. The latter were much less numerous than usual in these cases.

Wad of paper and cloth removed from lacerated wound of the leg.

Dr. J. E. MEARS presented a mass consisting of paper and cloth, which had been fired from a small cannon, one and a half inches in bore, and which, at a distance of forty feet, produced a lacerated wound of the leg in a patient who was admitted to St. Mary's Hospital.

Fragments of bone from compound comminuted fracture of the skull.

Dr. MEARS presented fragments of bone removed from the frontal bone of a boy æt. 14 years, who had sustained a compound comminuted fracture of the skull, caused by an iron clamp weighing fourteen pounds, which fell a distance of thirty feet, striking the head.

A report of the case appeared in the number of the *Medical Times* for October 3, 1874.

SELECTIONS.

KOLBE ON THE ANTISEPTIC PROPERTIES OF SALICYLIC ACID.

THE physiological action of this substance has been little studied, though its physical and chemical properties are pretty well known. From the fact that it can be readily composed from carbolic acid and carbonic acid, and that, on heating above the boiling point, it is decomposed into these two substances, Professor Kolbe, of Leipsic, was led to expect that, like carbolic acid, it would oppose processes of fermentation and putrefaction, and prove a good antiseptic. Along with Professor Thiersch, he made some experiments in this direction, which he has recently described to the Saxon Academy (see Dingler's *Polytechnisches Journal*, 2d July number).

To ascertain how salicylic acid acted on ferments, he first dissolved some amygdalin in water, mixed with the solution a small quantity of the acid, and added an emulsion of sweet almonds. In a quarter of an hour, by which time a second mixture of almond emulsion

and amygdalin, without salicylic acid, smelt strongly of bitter-almond oil, the mixture containing the acid had not the least trace of such a smell. If the proportion of salicylic acid be very small, the smell will appear after some hours; but, with even a small quantity, no smell will be perceptible after twenty-four hours.

Mustard-seed powder, which in lukewarm water soon gives a strong smell of mustard oil, gives no such smell if a very little salicylic acid be previously mixed with it.

If a solution of grape sugar be mixed with a little salicylic acid (a thousandth at the most), yeast has afterwards no action, and a sugar solution already in fermentation ceases to ferment when a small quantity of the acid is added.

[Details of such an experiment are given.]

Again, some Leipsic beer of excellent quality was divided among several wide glass beakers (1000 grammes to each), and kept fourteen days at a temperature varying between 68° and 75° Fahr., the vessels being covered with loose paper. To one vessel was added (and mixed with the beer) 0.2 gramme of salicylic acid; to a second, 0.4 gramme; to a third, 0.8 gramme; to a fourth, 1.2 gramme; in another glass the beer remained unmixed. This last began at the end of the second day to deteriorate, and became coated with a layer of fungus. In the vessel with 0.2 gramme of salicylic acid the fungus-vegetation commenced on the third day; in the vessel with 0.4 gramme, on the fifth; in that with 0.8 gramme, on the tenth; while the 1000 grammes of beer to which 1.2 grammes of acid had been added did not, even after twelve days, show any fungus-vegetation. Thus, a thousandth of salicylic acid, added to beer, suffices to preserve it from injury through fungus-growth.

Next, fresh and pure cow's-milk, with 0.4 per cent. of salicylic acid added, and left in an open vessel, at a temperature of 64.4° Fahr., was thirty-six hours later in curdling than an equal quantity of the same milk beside it which was without salicylic acid. The addition of a little more salicylic acid delays the souring and coagulation still longer. The milk continues to taste well; the taste of the small amount of acid is not perceptible.

Some newly-passed urine was divided into two portions, and kept several days in separate vessels. A little salicylic acid having been added to one portion, this was found on the third day still clear and free from the smell of ammonia; while the other portion was already far gone in decomposition, and smelt strongly.

Fresh meat, rubbed with salicylic acid, will keep for weeks, in air. The author prepared large quantities of beef and mutton with the acid, put them in a large covered vessel, and a month afterwards he found them still quite fit for cooking. Most of the salicylic acid can be removed by washing, before the use of the meat. The remaining portion has a not unpleasant sweet taste, but it is hardly perceptible.

Professor Kolbe further states that he put hen's eggs, fresh laid in March and April, in an aqueous solution of salicylic acid, and let them lie about an hour in it. After drying, in air, they were laid in a box filled with chaff; in a second box was placed similarly a fresh egg, which had not been impregnated with acid. The eggs will be examined after six, nine, and twelve months have passed, and the results communicated.

Professor Thiersch made some experiments in the Leipsic Hospital as to the antiseptic action of salicylic acid and its use in surgery. He says that when strewn (either by itself or mixed with starch) on contused wounds not yet cleaned and on scurfy gangrenous surfaces, salicylic acid destroys, for a long time, the putrid odor, without any inflammatory action of importance. In solution of one part of salicylic acid, three parts of phosphate of soda, and fifty parts of water, it favors the coating over of granulation-surfaces. As to its action on fresh wounds, the following data are communicated.

During the operation, the wound is kept under a spray cloud of salicylic acid in water (one in 300). The dressing of the wound consists of wadding, impregnated with salicylic acid in the crystallized state. The wadding is moistened with salicylic acid in water (one in 300), as also the strip of muslin by which it is held. Afterwards, a continuous dripping of the acid solution on the bandage, about eight drops in the minute, is maintained. After an amputation of the femur on April 27, under such treatment, the patient experienced no pain, nor swellings, nor fever. The first renewal of the dressing was on the sixth day. The secretion in the wound during these six days was without smell. With equally good results, Dr. Thiersch performed some other amputations. He is of opinion that salicylic acid has all the advantages of carbolic acid, without its inconveniences.

ALEX. B. MACDOWALL.

—*London Medical Record.*

GLEANINGS FROM OUR EXCHANGES.

GUNSHOT FRACTURE OF THE SKULL—TREPHINING—RECOVERY (*The Lancet*, September 19, 1874).—Mr. H. H. Smith reports the case of a man, æt. 20, who attempted to commit suicide by shooting himself in the forehead. When seen immediately afterwards he was quite insensible, and his face was covered with blood, which proceeded from a star-shaped wound in the forehead just above the nose. The wound and the surrounding skin were blackened with powder, and both tables of the skull were visibly extensively comminuted. There was a jagged, irregular opening in the external table of the skull, through which the finger could be easily passed, when it came upon a mass of comminuted bone of the internal table, which was pressing upon the membranes of the brain. His extremities were cold, and his pulse slow; there was no paralysis, and the pupils acted; there was no strabismus.

Mr. Lawson proceeded to examine the wound and to remove all the detached portions of bone and the pieces which were partially broken and pressing on the brain. As the external wound of the frontal bone was much smaller than that of the internal table, two small semi-circular portions of bone were removed by the trephine from above and below the opening in the external table of the skull, and with a pair of dressing-forceps nine pieces of bone and the bullet were lifted away from the surface of the dura mater, which was found to be considerably lacerated. One of the fragments of bone was nearly as large as a florin, and some small pieces of the dura mater came away attached to some of the fragments of the bone. The contused and lacerated integument was then adjusted as far as possible over the wound, and a pad of wet lint, without any disinfecting fluid, was laid over the parts, and kept in position by a strip of plaster.

After about a week of inflammatory trouble the patient began to grow better, and then progressed steadily to complete recovery.

THE ACTION OF MERCURY (*The British Medical Journal*, August 29, 1874).—Dr. James Ross believes that a study of the physical properties of mercury will prepare us to expect that it will have a profound effect upon the body, and that the following may be laid down as general laws, other things being equal: 1. The generality of the effect produced by an agent increases directly as its molecular mobility. Mercury possesses a high degree of molecular mobility, since it is fluid, and volatilizes to a sensible extent at ordinary temperatures: hence it may be expected to produce a very general effect upon the body. 2. The more massive the

molecule of an element, the more defined the action its compounds produce on the parts of the body upon which they act. The molecule of mercury is massive: hence its action may be expected to be not only general, but specific. 3. The salts of those agents which form stable compounds with albuminous substances are retained for a comparatively long period within the body. The salts of mercury form very stable compounds with albumen, and it is known to be retained for a long period.

After absorption, mercury has a preferential action upon the white tissues of the body, more especially the adenoid tissue, which it stimulates to increased activity. It does most good in chronic indurations and effusions. It is used in syphilis during the induration of the primary sore, and in the secondary stage after the fever has subsided. It does no good in the tertiary symptoms, because the disease is then acting on tissues for which mercury has no affinity.

MULTILOCULAR SERO-CYSTIC OVARIAN TUMOR SUCCESSFULLY TREATED BY MEANS OF THE ELECTRO-PUNCTURE (*The Chicago Medical Journal*, September, 1874).—Dr. Plym S. Hayes reports the case of an unmarried woman, æt. 40, who suffered from an abdominal tumor which she had first discovered about four months previously.

The abdomen was as large as that of a woman five months pregnant. The growth extended an inch and a half above the umbilicus when the patient was supine. As the abdominal walls were quite thin, the outlines of the tumor were easily distinguished. Three lobes could be distinctly outlined: one in the right iliac fossa, which had attached to its inferior portion a pedicle passing into the cavity of the pelvis; one to the left of the median line, connected by a band to the first-named lobe; and a third—the original tumor—below this band and just above the pubis: this lobe was felt to be nodule.

Fluctuation could be distinguished in the first two when palpation was employed over each separately, but not when the hand was placed over the one and the other percussed.

Digital examination revealed the fact that the os uteri was directed backward, pressed firmly against the rectum, and congested. Bimanual examination demonstrated that the tumor was not uterine. The sound was introduced into the uterus, and the tumor moved from side to side without producing any marked movement of the sound. The uterus was of normal depth.

Local anæsthesia having been produced by means of ether-spray, two needles were introduced, one into the right cyst, the other into the left, and the current was applied for a few minutes. No trouble followed. This operation was repeated three times during the following month, general electrical treatment being continued during the intervals. No unpleasant effects were at any time experienced, and the treatment resulted in the entire disappearance of the tumor and the complete recovery of the patient.

INJECTION OF MORPHIA INTO A VEIN (*St. Louis Medical and Surgical Journal*, October, 1874).—R. W. Erwin details his own experience on an occasion when he accidentally introduced about one-third of a grain of morphia into a vein, while giving himself a hypodermic injection for the relief of pain caused by a poisoned wound. He was almost instantly seized with a sudden and terrible pressure in the back and basilar portions of his brain. This was of great intensity, and created such a sensation of fullness that he felt as if he would immediately become unconscious; his face was flushed, eyes injected, lips cyanotic, and his skin stung as if pricked with innumerable needles. Applications of cold to the head and neck somewhat relieved these symptoms.

Subsequently there were intense cerebellar headache, general hyperæsthesia of the surface, a severe rigor, and bilious vomiting. Four or five grains of quinine and an ounce of whisky were taken, and about seven hours after the accident the injection was repeated, with the effect of arresting vomiting, relieving pain in the head, and securing sleep. The writer believes that the safest plan of administering a hypodermic injection consists in selecting the part most sparsely supplied with vessels, then gathering up a fold in the fingers, making sufficient pressure at the base to shut off the circulation, after which, slowly injecting the solution. The syringe is then removed, but the pressure is kept up, and only lessened gradually after one or two minutes. This procedure, even should a vein be punctured, will allow of such gradual admission of the drug as not to occasion serious trouble.

EFFECTS OF STAIR-CLIMBING UPON THE HEALTH OF GIRLS (*Detroit Review of Medicine and Pharmacy*, October, 1874).—Mr. George E. Smith, after having investigated the above subject, has concluded that the frequent and excessive climbing of stairs which is rendered necessary by the arrangement of most young ladies' seminaries or colleges is a prolific source of spinal weakness, menorrhagia, etc. He believes, however, that improper dress is really the primary cause of these troubles; tight corsets and heavy skirts rendering any unusual muscular exertion hurtful and dangerous.

A CASE OF CHYLOUS URINE (*The Edinburgh Medical Journal*, September, 1874).—Mr. Robert Smith reports the case of a married woman who, until about two years previously, had enjoyed uninterrupted good health. She then began to be annoyed by a constant pain in the left side, in a position which corresponded to the region and course of the left ureter. There were periods of exacerbation when the pain became acute and was accompanied by sickness. She experienced a scalding extending upwards along the urethra when she voided urine, at the same time that the quantity became diminished; her breath became short, and her ankles swelled towards night. A swelling at the seat of pain became apparent, enlarged, and was very sensitive on motion or pressure. This lasted for some time, until one morning, feeling a temporary relief, she took a walk, which induced a return of her agony. On reaching home she threw herself on her bed, and felt overpowered by a feeling of faintness; then something gave way internally, the swelling in the side subsided, and she soon found herself free from pain, and slept in comparative comfort. The urine next passed looked like thick blood, and contained large quantities of pus; the amount passed after this gradually increased; it was of a dull white color, with a heavy sediment. The oedema disappeared from her ankles, and she was without pain, but suffered from a ceaseless thirst and great weakness, with loss of flesh and appetite. These symptoms gradually progressed, until she died in a comatose condition and greatly emaciated. The urine retained the same character to the last, containing a little fat, albumen, and much pus. The remedy which most diminished the quantity of urine passed was gallic acid, but it was discontinued on account of distressing symptoms which supervened on its use.

TYPHOID FEVER COMPLICATED WITH ŒDEMA OF THE GLOTTIS.—*The Irish Hospital Gazette*, July 15, contains the notes of a case of typhoid fever occurring in the Meath Hospital, in which, during convalescence, that somewhat rare complication, acute oedema of the glottis, occurred, followed by abscess of the larynx. Timely incisions, with external revulsive applications, saved the patient, who was kept alive by nutritive enemata during the progress of the treatment, etc.

MISCELLANY.

MEDICINE AS A PROFESSION FOR WOMEN.—During the last week in August a congress of Danish physicians, more than two hundred in number, met at Aarhus, when, among other points under discussion, the claims of women to enter the profession were brought forward. The congress came to no definite determination on the subject, but it listened with patience to the members who pleaded the cause of female students, and the general feeling at the meeting seemed to be that there was nothing to prevent women from treating the diseases of their sex with ability and success, while in the matter of obstetric practice it was in the highest degree desirable to transfer it completely from the hands of common midwives to those of women duly certificated by the University.—*London Medical Record*.

THE PROFESSION IN EUROPE.—The *Golos* of St. Petersburg states that in Russia there is but one physician to every 17,800 souls. There are governments such as that of Perm, circles like that of Sherdink, where the proportion is still smaller, and there is scarcely one physician to 60,000 souls. There is, moreover, one hospital to every 175,000 inhabitants; one for women in labor to every 6,000,000; one for foundlings to every 1,350,000; one lunatic asylum to every 390,000; one deaf and dumb institution to every 11,000,000. The Russian journal says that the army is better provided for, there being one hospital to every 5000 men. In Prussia the proportion is one to 1250; in Italy there is one physician to every 2280 inhabitants; in England there is one medical man (surgeons included) to every 3180.—*The Medical Press and Circular*.

NOTES AND QUERIES.

4037 CHESTNUT STREET, PHILADELPHIA, }
October 12, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I shall be much obliged to you if you can insert the following in your journal:

I am preparing a paper upon *The High or Supra Pubic Operation of Lithotomy*, and, as I desire to have my statistics as accurate and complete as possible, would be glad to receive accounts of any unpublished or inaccessible cases.

The points, of which I desire as many as possible, are—

- I. The name of the surgeon.
- II. The date of the operation.
- III. The sex and age of the patient.
- IV. The size and weight of the calculus.
- V. The result of the operation.
- VI. The time, after the operation, of death or recovery.
- VII. The cause of death, and any remarks as to complications, etc., which may be useful.

Any of your readers who know of cases and will send them will confer an obligation upon

Yours very truly,

CHARLES W. DULLES.

THE following ode gives a witty exposé of the condition of the different schools of philosophy. The refrain is, of course, to be repeated by those who like it, after each stanza:

A DIDACTIC ODE.—*To be sung to the tune of "Guy Faux."*

Ours is a wise and an earnest age, an age of thought and science, Sir;
To error, ignorance, and bliss we fairly bid defiance, Sir.
"Professors" everywhere abound, both in and out of colleges,
And all agog to cram our nob's with "isms" and with "ologies."

Bow, wow, wow,
Tol de riddle, tol de riddle,
Bow, wow, wow.

Philosophy, as you're aware, material and mental, Sir,
At one extreme is "Positive," at t'other "Transcendental," Sir;
And each of us who in these days would speculate "en règle,"
If he can't run the rig with Comte, must take the tip from Hegel.

The fundamental problem which, debated now for ages, Sir,
Is still attacked and still unsolved by all our modern sages, Sir,
Is, if an effort I may make a simple form to throw it in,
Just what we know, and why we know, and what's the way we know it in.

We can't assume (so Comte affirms) a first or final cause, Sir.
Phenomena are all we know, their order and their laws, Sir;
While Hegel's modest formula a single line to sum in,
Is "nothing is and nothing's not, but everything's becomin'."

"Development" is all the go, of course, with Herbert Spencer,
Who cares a little more than Comte about the "why" and "whence,"
Sir.

Appearances, he seems to think, do not exhaust totality,
But indicate that underneath there's some "Unknown Reality."

And Darwin, too, who leads the throng "in vulgum voces spargere,"
Maintains Humanity is naught except a big menagerie,
The progeny of tailless apes, sharp-eared but puggy-nosed, Sir,
Who nightly climbed their "family trees," and on the top reposed, Sir.

There's Carlyle, on the other hand, whose first and last concern it is
To preach up the "immensities" and muse on the "eternities;"
But if one credits what one hears, the gist of all his brag is, Sir,
That "Erbwürst," rightly understood, is transcendental "Haggis," Sir.

Imaginative sparks, you know, electric currents kindle, Sir,
On Alpine heights, or at Belfast, within the brain of Tyndall, Sir;
His late address, some people hold, is flowery, vague, and vapory,
And represents the "classic nude" when stripped of all its "Draper"-y.

Professor Huxley has essayed to bridge across the chasm, Sir,
"Twixt matter dead and matter quick by means of "protoplasm," Sir,
And to his doctrine now subjoins the further "grand attraction"
That "consciousness" in man and brute is simply "reflex action."

Then Stanley Jevons will contend in words stout and emphatical
The proper mode to treat all things is purely mathematical;
Since we as individual men, communities, and nations, Sir,
Are clearly angles, lines, and squares, cubes, circles, and equations, Sir.

George Henry Lewes, I'm informed, had "gone off quite hysterical"
About that feeble, foolish thing, the "theory Metempirical;"
And only found relief, 'tis said, from nervous throes and spasms, Sir,
By banging straight at Huxley's head a brace of brand-new "plasms,"
Sir.

Such are the philosophic views I've ventured now to versify,
And, if I may invent the term, in some degree to "tersify."
Among them all, I'm bold to say, fair room for choice you'll find, Sir,
And if you don't, why then you won't and I for one sha'n't mind, Sir.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 13 TO OCTOBER 19, 1874, INCLUSIVE.

WHITE, R. H., ASSISTANT-SURGEON.—To report to Lieutenant-Colonel Brooke, Third Infantry, commanding troops in New Orleans, La., for assignment to duty. S. O. 162, Department of the Gulf, October 13, 1874.

CARVALLO, C., ASSISTANT-SURGEON.—Assigned to duty at Fort Stanton, New Mexico. S. O. 166, Department of the Missouri, October 14, 1874.

WOODRUFF, EZRA, ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and upon its completion, to the Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 224, A. G. O., October 16, 1874.

SATURDAY, OCTOBER 31, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE ON SYMPATHETIC IRRITATION.

Abstract of a Lecture delivered at the Hospital of the University of Pennsylvania,

BY WILLIAM F. NORRIS, M.D.,

Clinical Professor of Ophthalmology.

Reported by S. D. RISLEY, M.D., Chief of Dispensary for Diseases of the Eye.

GENTLEMEN,—I desire to call your attention to-day to the subject of *sympathetic irritation*, as being one of the most interesting and important chapters in eye-surgery. It is a fact long observed that where an eyeball has been rendered sightless from inflammation, the result of injuries or otherwise, and is undergoing degenerative changes, it is liable to recurring attacks of inflammation, at which times the other eye may become sympathetically affected.

This of itself is a remarkable fact, and quite contrary to our general experience in other organs; for it is a matter of every-day observation that an inflammation of one hand or foot, for example, no matter how severe or long continued, does *not* usually cause any disturbance in its fellow. There are, it is true, a certain number of accurately observed cases where it has been found that, owing to some not yet thoroughly explained action of the nervous system, inflammation or injury of one side of the body does affect a corresponding area of the other side. This is well shown in the rare and interesting cases of so-called reflex paralysis, or, as some prefer to call it, paralysis from peripheral irritation, following gunshot wounds. Thus, in Circular No. 6, Surgeon-General's Office, for 1864, Mitchell, Morehouse, and Keen report an instance of gunshot-wound of the external side of the left thigh, followed by complete anæsthesia of a corresponding area of the right thigh.

Annandale* also relates a case of wound of a finger, with painful cicatrix and glossy skin, followed by a similar condition of the other hand.

Such instances, as well as the occasional symmetrical disposition of new growths and of cutaneous eruptions on the two sides of the body, although affording abundant food for reflection for the physician, are nevertheless exceptions, which by their paucity rather prove the rule. Unfortunately, however, in inflammations of the ciliary body and iris of one eye we find only too frequently that a similar inflammation develops itself sympathetically in its fellow. And I now propose to study a little in detail the character of the affection so developed, and the circumstances under which it is produced.

In health there is a natural sympathy between the eyes, made evident by the consensual movements of the irides and eyeballs. Thus, all the movements of both globes are in harmony with each other, and

when one eye moves to the right, for example, its fellow makes a similar and equal excursion.

Again, although one eye may be screened from the light, nevertheless its iris will dilate and contract consentaneously with the uncovered eye, as it is exposed to varying light and shade. The same is true of the accommodative efforts. Being thus intimately associated in health, it might be reasonably anticipated that in diseased conditions there would probably be manifested more or less of sympathy between the eyes; and clinical experience proves the inference quite correct. How this conveyance of symptoms from one eye to the other is effected has been the subject of considerable discussion. The first and most natural conclusion, based upon slight observation, was that it was conveyed from the inflamed to the well eye through the intimate relation furnished by the optic commissure; but sympathetic irritation has occurred where there existed complete atrophy of the optic nerves; and, moreover, it is notorious that it does not occur in cases of inflammation of the optic nerve or retina, while it is very frequent in inflammations of the ciliary region. This, as well as other anatomical and physiological observations, makes it probable that it is transmitted through the agency of the ciliary nerves, branches of the trigeminus, or the accompanying filaments of the sympathetic.

This affection has been divided by systematic authors into *sympathetic irritation* and *sympathetic ophthalmia*. Donders and Lawson, indeed, maintain that the one never passes over into the other, but that they are separate and distinct affections, differing in kind. However this may be, the propriety of drawing a marked line of distinction between them is made evident by the clinical history of the disease: the *first* being characterized throughout only by irritation and disturbance of function of the sound eye, which symptoms are promptly arrested by enucleation of the primarily affected one; the *second* by the outbreak of a violent plastic inflammation of the iris and ciliary body of the hitherto sound eye, which at best leaves impaired vision, and is not amenable to any treatment. Even enucleation of the first-affected eye often fails to arrest its march.

Symptoms of sympathetic irritation.—In the first form of the disease, viz., that of irritation at a variable period after injury of one eye, or after the occurrence of an inflammation in an atrophied eye, there sets in an irritation of the sound eye, evinced by an undue sensitiveness to light, increased lachrymation, and an inability to read for any length of time, owing to a failure of the accommodation. The print, when fine, rapidly becomes blurred, and any use of the sound eye brings on pain in the inflamed one. The inflammation in the injured eye usually involves the ciliary region, which is intensely painful on pressure, and is accompanied with a marked pericorneal and ciliary zone of injection, and with the intense neuralgia which accompanies all attacks of irido-cyclitis.

The second form of the disease, viz., *sympathetic ophthalmia*, exhibits, in addition to the above-men-

* Mitchell, *Injuries of Nerves*, p. 159.

tioned group of symptoms, an irido-cyclitis of the hitherto sound eye. There is now a marked ciliary zone, indicative of the inflammatory process going on within the eye. The media begin to lose their transparency, the usual brilliancy of the iris is exchanged for a dull greenish color, from the effusion of plastic lymph into its substance. This is also thrown out upon its posterior surface, and through its agency the iris becomes firmly glued to the anterior capsule of the lens. At the same time floating vitreous opacities may be detected with the ophthalmoscope or by the patient as dark bodies floating in the field of vision. The pupil, bound down to the anterior capsule by layers of plastic lymph, is still further encroached upon by depositions of the same material, which soon entirely block it up, and thus effectually exclude the light and render the eye useless for all purposes of vision.

One of the most marked characteristics of the disease is often a retraction of the periphery of the iris and consequent deepening of the anterior chamber. Sometimes there is an accumulation of fluid behind the iris, and a consequent bulging of portions of it into the anterior chamber. When, after such an inflammation, the eye becomes quiet, it may either be entirely sightless from detachment of the retina and involvement of the choroid, or, the changes having been limited to the anterior portion of the eye, it may still retain a fair perception of light.

Such, gentlemen, is a brief rehearsal of the history of uninterrupted sympathetic ophthalmia.

Let us turn our attention now more particularly to the stage of irritation during which alone you can expect much benefit from treatment. During this first stage of the disease you can promise your patient almost certainly that his uninjured eye will be saved to him, and that the painful symptoms of irritation will be promptly relieved by enucleating the offending eye; to which proposal he will usually submit in order to get relief from the excruciating neuralgia and "weakness" of the other eye, which together prevent sleep at night and forbid any useful employment during the day.

In order that you may have a clearer comprehension of the disease, I will now bring before you an illustrative case which has lately presented itself at the clinic, and in which I purpose enucleating the injured eye in your presence; and will further read in your hearing, from the clinical record we have kept, a few other illustrative cases showing—(1) its relative frequency, (2) the more common modes of its production, (3) its amenability to treatment.

First, then, it is a quite common disease at all large clinics among an industrial population. An analysis of the last twelve hundred cases of eye-diseases presenting themselves at this clinic shows that it constitutes 1.4 per cent. of the whole number. As this number agrees in the main with the percentage of cases falling under my charge at the Wills Hospital (1.3), I suppose it is a fair average, so that you will observe it forms no inconsiderable part of the cases to be treated at a public service.

The most frequent causes of sympathetic ophthalmia are, first, wounds of the ciliary region, especially those followed by prolapse of the iris; secondly, foreign bodies remaining within the eye; and thirdly, degenerative changes taking place in atrophied bulbs. Of these, wounds in the ciliary region are by far the most frequent source of the malady. But in all cases, traumatic or otherwise, its mode of production is by inducing an irido-cyclitis in the one eye, which by sympathy is reflected upon or propagated to its fellow.

As illustrative of this class of injuries, gentlemen, I have selected the case of W. K. from many others in our clinical record. In it several of the leading features of this affection are well marked.

Case I.—William K., æt. 29, *wound of ciliary region.* Patient presented himself at the University clinic, February 1, 1871, having the preceding day received a severe wound of the right eye, inflicted by a piece of glass. It then presented an irregular incised wound of cornea, sclera, iris, and lens, the wound starting above and to the inside in the ciliary region, and extending obliquely outwards and downwards, completely across the cornea, and terminating in the sclerotic as on the other side. The cornea was yet clear; there was some ecchymosis of conjunctiva and lids. One year later he again presented himself at the clinic, when the following record was taken:

Uninjured left eye, $V = \frac{20}{XX}$, and reads Jaeger 1, from 6'' to 16''; right, counts fingers. Bulb is deformed, and presents a broad band-like cicatrix across the cornea. It is tender to the touch, and there is a pronounced zone of ciliary injection. It has been subject to occasional attacks of inflammation, becoming red and painful, at which times he is unable to use his other eye, "because it waters, and the print blurs, and he has severe frontal headache." Ophthalmoscope shows in left eye a healthy fundus, $H = \frac{2}{48}$ central excavation.

In this case, you will observe, we have the important factor in the causation of sympathetic ophthalmia, viz., an injury in the ciliary region. We see, too, that after even so severe an injury the inflammation subsided, and the eye became quiet, so that his visits at the clinic ceased; but a year later he returns with the history of occasional attacks of inflammation in the injured eye, during which the other eye was weak: i.e., it watered when he attempted to use it, and the print soon blurred in consequence of the failure of his accommodation. Here, gentlemen, we have the history of nearly every case of sympathetic irritation following wounds; a variable period of quiet, after which, sooner or later, the eye becomes liable to recurrent attacks of inflammation, and the sympathy of the other eye is manifested in its failure of accommodation and extreme irritability.

The next case presents the same characteristic symptoms to which I have just alluded, viz., the recurrent attacks of inflammation and loss of accommodation in the uninjured eye; but in it you will see a more active inflammation in the injured eye, the pupil blocked up with lymph, the iris greenish, the eyeball softened and atrophied; and another very characteristic symptom, the retracted iris, and consequent deepening of the anterior chamber brought about by contraction of the inflammatory

exudations in and around the ciliary processes and on the posterior surface of the iris itself.

Case II.—C. L., æt. 30; *wounds of ciliary region,—sympathetic irritation.* Two years before applying at the dispensary, June 14, 1872, had been struck in the eye by a fragment of stone, which caused some inflammation and pain. After a few weeks the pain and redness subsided, and he affirmed that his vision was as good afterwards as before the injury. Since, however, he had had repeated attacks of inflammation in the injured eye. And at the date of his first appearance at the clinic we found he had only quantitative perception of light. There was a well-marked scar at upper portion of cornea. The iris, which in the other eye is hazel, in the injured one had become greenish and dull; while a dense yellowish mass of lymph entirely blocked up the pupil. The anterior chamber was much deeper than in the other eye. There was also marked ciliary zone of injection, and the ball was softer than it should have been (T—1.) With the uninjured eye he was able with difficulty to read No. 3 of Jaeger's types at 13'', and that but for an instant, as the eye tired rapidly; but at a distance had, for an instant, nearly the normal acuity of vision,— $V = \frac{20}{xxv}$.

In both these cases, enucleation of the injured eye was followed by a rapid subsidence of the irritation of its fellow. We may have sympathetic irritation set up from other causes than direct injuries or wounds of the ciliary region.

Adhesions between the lids and balls—*symblepharon*—may also give rise to ciliary inflammation and sympathetic irritation, for in every movement of the sound eye the other must also participate; but with every movement to right or left or up or down, there is a pull upon the band of adhesions which is liable to increase the inflammation caused by the original injury in the eyeball.

Case III.—*Symblepharon—sympathetic irritation.*

H. H. R., æt. 41, a blacksmith, while working at his anvil was struck upon the eye with an iron bolt, which flew up from under his hammer. It struck upon the outside of the upper lid. The accident had occurred five months before he applied at the hospital for treatment. Vision in that eye was entirely destroyed by the inflammation which followed the injury. The upper lid was firmly bound to the ball by extensive adhesions over the ciliary region. He applied for relief not only from the pain in the injured eye, but also complained that for the preceding three months his other eye had annoyed him by flashes of light, and for a few weeks by dark bodies floating in the field of vision. He found that he could no longer read without glasses, and that even with these the print soon became blurred. The ball was enucleated. The patient, after a somewhat prolonged convalescence, regained the good use of his other eye.

The patient before you is one of a similar nature.

Case IV.—W. K., æt. 26; *symblepharon—sympathetic irritation.* Four weeks before applying at the hospital dispensary for treatment (Sept. 8, 1874), had received a splash of slaking lime in his right eye. The ball was found covered with redundant granulations, which encroached upon the entire periphery of the partially opaque cornea. Both upper and lower lids were adherent to the ball, which was soft and sore to the touch. The ophthalmoscope revealed no changes in the sound eye, nor did the examination with the gas-light prove at all painful. He was treated by instilling a solution of the sulphate of atropia.

Two days later, the sound eye became unduly sensitive to light. This has gradually increased until yesterday, ten days after first applying at the clinic, the light of the ophthalmoscopic mirror was blinding, and the examination so painful as to be quite insupportable. The optic disk was now found intensely capillary, and there was slight maceration of the choroidal pigment epithelium. He was advised to part with the injured eye in order to arrest the changes which have already begun in its fellow, and, having concluded to accept the advice, the operation will in a few minutes be performed in your presence.

I have already told you that degenerative changes in a sightless ball frequently lead to sympathetic irritation, and it may be many years after the injury which led to the destruction of the eye, as in the two following cases.

Case V.—J. L., æt. 32; *degenerative changes; formation of bone; sympathetic irritation.* Twenty-two years ago (at the age of ten years), while sledging stone in a quarry, was struck by a splinter in right eye. After healing of wound the ball never gave him any trouble till two years ago, when it became inflamed and painful. Since then the eye has remained more or less sore, at times very red, and intensely painful. Now the right ball is shrunken, and there is no perception of light. There is marked ciliary injection, and it is exceedingly painful when touched. The left eye has vision $\frac{20}{xx}$, but has lately become very sensitive to light; its accommodation is impaired, and all print becomes blurred after looking at it for a few moments. The iris, on shading the inflamed eye, dilates irregularly, moving more freely above and below than to either side, and thus assuming an ovoid shape, but under the influence of atropia dilates regularly and to the maximum. The ophthalmoscope shows that the media are clear, but the disk looks dirty and is hyperæmic.

The ball was carefully hardened, and a section made of it shows a shell of bone between choroid and retina; starting near the optic entrance and extending forward to the ciliary region; and this apparently, by causing inflammation of choroid and ciliary body, had been the cause of the sympathetic disturbance in the sound eye.

Another case where, as many of you will remember, I enucleated the injured eye in your presence, only a week ago, is a good example of the same degenerative change.

Case VI.—E. F. L., æt. 32, when seven years of age lost the right eye by a punctured wound with a pen-knife. Fourteen years later (1865), he had in it a violent attack of pain and inflammation, and since that time numerous other attacks of inflammation, with violent supra-orbital pain. There was marked ciliary injection of the sightless eye, and the upper part of the ciliary region was sore to the touch, as was also a corresponding point of the left eye. He has also in this eye pain after reading five or ten minutes, and it always commences at this spot. The ophthalmoscope shows that it has a hypermetropia of $\frac{1}{4}$ th, that the disk is unduly capillary, and that there is a partial maceration of the choroidal epithelium. A section of the enucleated eye showed a dense sub-retinal shell of bone extending thickest posteriorly, but extending forward into the ciliary region.

There is another item in these cases to which I would particularly call your attention,—viz., that the sympathetic neurosis in the sound eye did not begin until the bony formation had extended forward so as to encroach upon the ciliary body.

Case VII.—S. C., æt. 66; wound of ciliary region; intra-ocular tumor; sympathetic irritation. Patient first presented himself at the University clinic in November, 1870, for a painful inflammation of left eye, which had been destroyed by inflammation following an injury six years before. He had lost all perception of light. He stated that at the time of the injury "a small blister" had formed in ciliary region of upper part of the ball, at which point was still plainly visible a puckered scar. The iris was greenish, and the pupil blocked up by a mass of lymph. Eye somewhat shrunken and sore. In right eye $B = \frac{20}{XX}$, and it was not unduly sensitive to light, but soon tired with use. Enucleation was advised, but he did not consent. Two years later (Sept. 1872), he again presented himself at the clinic. The injured eye was red, extremely sensitive to the touch, and for six months had been so painful as to keep him from his ordinary employment as a weaver. In the other eye vision had fallen to $\frac{20}{XL}$; the eye was extremely sensitive to light, and had a well-marked deep ciliary zone of injection. The lids were thickened, their veins distended with blood, and conjunctiva thickened and opaque. The ophthalmoscope revealed marked fulness of the vessels, disk capillary, and extensive maceration of choroidal epithelium; media clear.

Enucleated; four weeks later, the remaining eye had become quiet and painless, and could be used continuously without discomfort.

A section of the hardened eyeball showed, in addition to the inflammatory condition of the ciliary region, a pigmented spindle-celled sarcoma in the posterior part of the ball.

Having seen that any injury or wound of the eye which eventually sets up an irido-cyclitis may give rise to a sympathetic irritation of its fellow, we must not be surprised to find that it is sometimes produced by operations on that organ. That this is the case is evinced by the result of the operation of iridodesis, which was, some years ago, like couching for cataract, quite the fashion. It was a shifting of the pupil by means of a cut just in advance of the ciliary region, into which a portion of the iris was drawn and tied until it became adherent through the healing of the wound. It has been abandoned in consequence of the great liability to the subsequent occurrence of irido-cyclitis and sympathetic irritation. The same may be said of reclination and depression of cataract. This was a most attractive operation, by which the opaque lens was forced from its position behind the pupil down into the vitreous humor and there allowed to remain. It was found that in a large number of cases an irido-choroiditis and cyclitis would be set up by the lens, which acted as a foreign body in the eye, and gave rise to choroidal changes, leading to a slow destruction of the eye, and at times setting up sympathetic irritation in its fellow.

Although more improved methods of operating for cataract afford comparative immunity from these untoward results, nevertheless we do not escape without a certain quota of such cases, as the following histories will show,—one having occurred in my own practice, the other in that of one of my colleagues.

H. L., colored, æt. 32, mother of several children, all of whom are more or less scrofulous, applied for relief in May, 1870, on account of dimness of vision, which had been coming on for over a year. There was complete

opacity in the right lens; that of the left being rather less advanced. The lenses were of a bluish-white color, with saturated, white, rounded spots, and their appearance, together with the age of the patient and the fact that there was a slight arcus senilis and a bluish tinge of the sclerotica, caused the diagnosis of complicated cataract. The perception of light was, however, good throughout the field, and a preliminary iridectomy was done upon the right eye, followed two months later by an extraction of the cataract by the peripheric linear method. The course of the operation and after-healing were normal, and in three weeks she went home with $V = \frac{20}{C}$. In April, 1873, she returned for operation on the left eye. Extraction was performed by the same method without loss of vitreous or other accident, and immediately after the operation patient could readily count fingers. The wound healed well, and nine days afterwards, although the eye was still red, she was discharged at her own urgent request, in order to permit her to wait on her sick husband. A few weeks later she returned to the dispensary, and was furnished with both reading and distant glasses. At this period her vision in the left eye was $\frac{20}{L}$; so good, indeed, that she could see to thread her needle, and learned to spell and read,—an accomplishment which she did not previously possess, the lack of which immediately after the operation had rendered the accurate determination of her vision a work of patience and time.

The eye remained quiet until March, 1874, although she thinks it was always more tender to the touch than that of the other side, when she states that she took cold in it and that it suddenly became red and painful, and on the next day the eyesight became dim. There was intense pain in the supra-orbital and temporal region, which confined her to bed for several days. By the advice of a negro quack, she poulticed the eye with laudanum and powdered cracker, besides taking opium freely internally. Six weeks later, finding that this treatment had not been successful, she again applied at the clinic for relief. At that time the conjunctiva of the left eye was scarlet; there was intense ciliary injection; the iris cloudy and discolored, pupil irregular, and filled with a mass of semi-transparent lymph. It dilated under the energetic use of atropia, but the vitreous was so cloudy that when examined with the mirror no reflex could be obtained from the fundus. The right eye was also beginning to suffer from the inflammation of its fellow; it was unduly sensitive to light, watery; there was supra-orbital pain in that side, vitreous opacities, and a vision of only $\frac{5}{CC}$. The left eye was enucleated, with prompt relief of the supra-orbital pain and a partial clearing up of the vitreous of the right eye.

The second case, H. F., æt. 70, had had the left eye operated for senile cataract two years previously. She had had good vision immediately after the operation, but, on the fourth day after it, severe pain and inflammation set in, eventuating in the loss of that eye. It is now atrophied and shrunken and has lost all perception of light. It has repeatedly been sore and inflamed, and eighteen months after the operation the right eye became inflamed and painful. She has now in it a bare perception of light, and it presents the appearance of an eye lost after a severe attack of serous iritis.

As regards the treatment of sympathetic ophthalmia, Mackenzie long ago pointed out the malignancy of this disease, and its rebelliousness to blood-letting alteratives and the ordinary methods of combating inflammation.

Cutting the ciliary nerves has been proposed and even done; but not only is it objectionable from the difficulty of its performance and the extensive injury inflicted in carrying it out, but we have no security whatever that the divided nerves will not reunite. In fact, gentlemen, there is but one remedy which has stood the test of experience, and that is enucleation of the primarily affected eye. It is simple in its execution, rarely followed by any untoward result, and in the stage of sympathetic neurosis always followed by cure. I think, therefore, that you will have no hesitation in recommending it to your patients. One word of caution in conclusion: insist on rest in bed and low diet for two or three days after the operation; forbid all use of the sound eye for two or three weeks subsequently, so as to give it a fair chance to recover its normal state, and do not allow any artificial eye to be worn till the wound is entirely healed and the stump has become hard and firmly cicatrized.

ORIGINAL COMMUNICATIONS.

A CASE OF DIAPHRAGMATIC HERNIA—THE REMOTE RESULT OF A STAB.

BY A. P. HULL, M.D.,

Montgomery, Lycoming County, Pa.

THE following case may be of interest to some of the readers of your journal:

Mr. R. G. M. T., a young man 31 years of age, of fine physique, and a perfect picture of health, received, on the 7th of January, 1873, a stab over the region of the left lung, which cut off the cartilage of the eighth rib, and, running downward, pierced the diaphragm a little to the left of the œsophageal opening, making an incision about an inch and a quarter in length. The wound soon healed, and after a few weeks he was able to attend to business, and apparently enjoyed good health until May, 1874, when he was seized with a violent attack of colic, which was relieved by the usual remedies.

During June and July he had two more attacks, which lasted two or three days, and it was only with the greatest difficulty that we succeeded in getting his bowels moved.

On Wednesday, the 30th of September, while at stool, he was again attacked with colic; and, every effort to relieve him proving fruitless, he finally died on Thursday, the 8th of October.

Large doses of purgatives were administered, in combination with the most persistent use of injections thrown far up into the bowel through the flexible tube, but without overcoming the obstruction.

At the post-mortem examination which I made, assisted by Drs. Crawford and Lyons, of Williamsport, and Drs. Albright and Wood, of Muncy, on the 9th of October, we found a greater part of the peritoneum and small intestines, and part of the large, in a gangrenous condition, and also a diaphragmatic hernia, a loop of the transverse colon having passed through the opening in the diaphragm and formed extensive adhesions to the lower lobe of the left lung, thus completely obstructing the passage of fecal matter.

NOTE ON THE TREATMENT OF EPISTAXIS.

BY WILLIAM I. WILSON,

Assistant-Surgeon U.S.A.

LATELY I have seen several short articles in the *Medical Times* and other journals concerning the use of persulphate of iron in epistaxis. In February, 1873, I had two severe cases of epistaxis to treat, which I did in the following manner:

I made a solution of the liquor ferri persulphatis, —one part to three of water,—then, introducing the nozzle of the ether-spray apparatus into the nostril from which the blood was flowing, I threw this solution up into the nostril in the form of *spray*, at the same time telling the patient to draw in his breath strongly. The bleeding ceased in a few seconds, and did not again return. The nostril, for a couple of days, was clogged with a hard bloody clot, but at the end of that time it came away naturally.

This, I think, is a much more efficient manner of treating epistaxis than that of plugging the nostrils by a plug of cotton or lint saturated with the solution of the persulphate, or any other method which I have seen mentioned.

FORT BAYARD, N. M.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINICAL LECTURE ON DISEASES OF THE SKIN.

BY LOUIS A. DUHRING, M.D.

Reported by ARTHUR VAN HARLINGEN, M.D.

ULCERATING SYPHILODERM.

THE case before us is a rare one: you would scarcely find its like anywhere outside of the hospitals of our large cities, and even in these such severe forms of disease are not common. It is an example of the affection usually called syphilitic rupia, a designation which I do not consider quite justifiable, so we will drop this term for the present, and speak of it as simply an ulcerating syphiloderm.

The patient comes before us to-day for the first time, and the only history which we can obtain is that the eruption has existed two or three weeks. Examination shows it to consist of open ulcers and of piled-up crusts of various sizes from that of a split pea up to half a dollar. These crusts and ulcers are scattered over the head, forehead, face, neck, shoulders, arms, and upper part of the trunk; the abdomen, loins, and hips are free, as well as the lower limbs, if we except a large ulcer and crust on the left thigh.

Looking more closely, we observe the reason why there are ulcers in some places and crusts in others: it is simply that in the former case certain ointments have been applied which have macerated the crust and caused it to come away, leaving the ulcer beneath. Bear in mind that the ulcer is the disease, the crust but the product; do not neglect the essential feature.

If we remove any one of these crusts, as I am doing now, an operation which can easily be performed and causes no pain, we see beneath an ulcer, variable in appearance and size. This one you see is quite shallow and granulating, while the other is deep, and its surface is covered with a layer of broken-down products of suppuration. It is proper to mention just here that

great care should be taken in handling these ulcers, whose secretion is virulently contagious, and if it were splashed into the face might be productive of serious consequences.

The treatment of a case like this is twofold,—hygienic and therapeutic. This woman requires the very best and most nourishing food,—beef-tea, milk, meat-soups, and the like,—as well as fresh air, and, so far as is possible, moderate exercise. As regards medicine, a tonic is required: one of the bitters, combined, perhaps, with iron in one form or another, and especially in connection with the iodide of potassium, in doses of from five to ten grains thrice daily.

ECZEMA OF THE TOES.

The present trouble has lasted, so the patient tells us, about four weeks. It began a month ago, with itching between the toes, the skin of which after a week became "raw" and "began to run water." Somewhat later, certain abrasions or slight superficial ulcerations showed themselves on the ends of the toes, healing up in a few days and again breaking out. This is the history of the case up to the present time, the treatment having been only slippery-elm poultices and some domestic salve of an irritating quality.

As presented before us to-day, the affection is characterized by redness and swelling, involving several toes of the right foot, together with a certain degree of secretion or moisture, and one or more abrasions on their extremities.

The diagnosis in cases of this kind is not always easy. The question arises, have we syphilis here or a simple eruption of a more specific nature? Is this an ulcerating syphiloderm,—for such are not uncommon in this locality,—or is it an ordinary eczema? Let us examine more closely. Pulling the toes apart and looking at them from beneath with some care, we see where the real trouble is. Here the skin is moist, red, and shining, but there is no ulceration; the affair is quite superficial. Moreover, there is no offensive odor, and this is an important point in guiding our decision. For were this a case of syphilitic disease the odor would be so fetid as to be almost unendurable, and it would resist all attempts at cleanliness; even washing most carefully three or four times a day would not be sufficient to overcome the disgusting stench.

We have then before us a case of eczema, and one of so mild a type that the simplest treatment will, in all probability, be sufficient to bring it to a speedy termination. The patient shall be directed to use a powder of the following composition:

R Zinci oxid.,
Amyli, aa ʒii;
Hydrargyri chloridi mitis, ʒss.—M.

This is to be dusted over the affected parts three times a day; no further treatment will be required.

Do not expect, gentlemen, that all your cases of eczema occurring in this locality will be so easily cured: occasionally you will meet some of an exceedingly stubborn character, when you will be obliged to make use of various stimulating washes, etc., and sometimes will have to resort to internal treatment.

LUPUS.

This woman is about 45 years of age, and has suffered from the disease for which she seeks relief here for nearly thirty years. She says that, so far as she remembers the commencement of the affection, it first made its appearance in the form of a small red pimple like a wart on the left side of the nose, whence it spread very slowly over the entire part in spite of all kinds of treatment. When she first made her appearance here, some six months ago, about two-thirds of the entire nose was the seat of the disease, while the remainder was a cicatricial mass.

The affection had even begun to penetrate the nares, which were nearly closed through the infiltration and subsequent contraction of the tissues.

The patient was at once put upon the use of the iodide of potassium in doses of ten grains three times a day, which she has continued to take up to the present day. About a month ago the application of emplastrum hydrarg. at night was ordered, and under the influence of this course of treatment the amelioration of the patient's condition has been gradual but continuous. But a small portion of the nose is now the seat of morbid action, and we may fairly hope that ere long that also will have entirely disappeared.

FURUNCULOSIS.

This little girl suffers from a trouble which is not at all rare among children, and the diagnosis of which is not difficult. She has, as you see, a number of boils of different sizes scattered over her head, body, and limbs. These are in various stages of progress, some quite hard, indolent, and indurated, others showing signs of approaching suppuration. Here is one on the buttock which is typical; it is large, dark red, very tender to the touch, with an areola reddish, fading away into pink in color, of at least five inches in circumference.

She has suffered from these boils during the whole summer; no cause can be assigned for their appearance; her health is in all other respects quite fair; she does not seem at all broken down.

Cases of this kind are at times very difficult to relieve; they often resist all varieties of treatment with the utmost stubbornness. In this case the patient was ordered Fowler's solution, ℥j thrice daily. She has been taking this about a week, and already begins to look a little better.

ECZEMA OF THE LIP.

This woman has been suffering from papular eczema affecting the fore-arms and arms, while at the same time she has a similar affection of the lower lip. The papular eczema of the arms has disappeared under the treatment, but this disease of the lips still remains.

The form which the eczema took originally in this locality was probably the vesicular, but vesicles appearing on the mucous membranes usually break down rapidly, as they have done in this case before us, and we see merely their bases and remains.

Eczema of the lip is a rare affection, and one very difficult to cure. Situated on a portion of the surface usually bathed in secretions of various kinds, and constantly subject to the irritation of the various ingesta, solid and fluid, it is of course impossible to keep any application in contact with the diseased surface; we must, therefore, have recourse in these cases to internal treatment. The patient before us has been taking for some time the following mixture, under the use of which she is slowly improving:

R Tinct. ferri chlor.,
Acid. phosphoric. dil., aa fʒss.—M.

Sig.—Twenty drops in water thrice daily after meals. Washes containing carbolic acid have been applied to the arms, and have afforded relief.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. MORTON.

Reported by J. J. KIRKBRIDE, M.D.

CASE OF ABSCESS OF THE KIDNEY, WITH RENAL CALCULUS—DISCHARGE OF THE STONE AND LODGMENT IN THE URETHRA—EXCISION.

J. D., aged 35, was first attacked June, 1872, with intense pain over the left kidney, which lasted a week. During the two or three succeeding days he voided with

the urine a large amount of pus. Six months afterwards he had a similar attack, followed as before by a copious discharge of pus. In three months he suffered in the same manner. The attacks now came on very regularly every three or four weeks, producing great exhaustion. About the middle of last June, while in New Orleans, he had a very severe spell. He left at once, and reached this city on the 29th of same month; was visited by Dr. Cantrell. The urine was loaded with pus, and contained some blood; the former was in amount about one-fourth of the bulk of urine passed; the blood was then observed for the first time. The pus and blood disappeared in a few days. Vesical irritation became a prominent symptom; but he was otherwise in excellent health.

In August he left for the South. On arriving in New Orleans he experienced a sudden obstruction in the urethra, which produced great difficulty in passing water. He came back at once, and on examination, September 1, a large calculus was found impacted in the penial portion of the urethra. Dr. Morton found it impossible to remove the stone with the forceps. An incision was made into the urethra, through which the stone was readily extracted. The wound united by first intention, and the patient has since enjoyed perfect health.

The calculus probably had its origin in the kidney, and from time to time had produced inflammation and abscess; the urethra was thus distended, and the stone was gradually forced into the bladder. The calculus is oval, and of the uric acid variety, and very hard; much resembles a large almond; weighs thirty grains; measures eight-tenths of an inch in length and an inch and a fourth in circumference.

NECROSIS OF THE PATELLA WITH RUPTURE OF THE QUADRICEPS TENDON AT ITS INSERTION, AND OPENING OF THE KNEE-JOINT.

J. A. F., aged 59, was admitted September 19, 1874. Last April had erysipelas of the left leg, ending in ulceration of the skin over the knee, which superficially exposed the upper surface of the patella, and necrosis, with the knee somewhat rigid from the cicatrix, followed. For a long time he has been a sufferer from locomotor ataxia. The day previous to his admission, while walking for the first time since his illness, on attempting to step upon a curbstone the simple bending of the joint caused a transverse rupture of the cicatricial tissue, including the upper surface of the patella, the attachment of the quadriceps muscle, and opening the joint.

September 26.—Severe suppuration having taken place, with pus collecting in the joint, the patella was removed, after dividing the lateral attachments and the ligament.

October 12.—The drain has gradually reduced the patient, causing death from exhaustion.

Treatment consisted in slight extension, sand-bags along the limb, with an anodyne, and supporting regimen.

INCISED WOUND OF NECK, INVOLVING THE LARYNX AND OESOPHAGUS; FOOD INTRODUCED INTO THE STOMACH BY HYDROSTATIC PRESSURE.

F. J., aged 37, was admitted September 30, 1874. While in a fit of temporary insanity he had attempted suicide. The incision was made just above the thyroid cartilages, severing the epiglottis, which remains by its lateral attachments, and the anterior wall of the gullet; the great vessels of the neck escaped injury.

The wound gaped so much that the movements of the vocal cords were easily seen, it being left open, and a gauze covering applied to the front of the neck. By direction of Dr. Morton, a pint of milk, half a pint of beef-tea, with half an ounce of whisky, were administered morning and evening. This was introduced into

the stomach by hydrostatic pressure, instead of the ordinary stomach-pump. To the rubber tube of a nasal douche bottle a stomach-tube was attached, which was passed into the stomach; the bottle containing the food was then elevated above the patient's head, and found to answer admirably, the liquid food flowing slowly and steadily. As soon as the stomach was distended, the patient experienced a regurgitatory sensation, when the tube was at once withdrawn.

This method, which has been faithfully tried in the hospital, is so simple that the old plan of feeding with the pump should be discarded. Should the bottle (the ordinary Thudichum douche vessel) with the opening at the bottom, to which the rubber tube is attached, not be at hand, any vessel may be adapted for the same purpose, the rubber tube being simply held in the fluid and suction made, by which a siphon flow is produced; pressure is made on the gum tube until the stomach-tube is introduced and an attachment made with the tubing, when the vessel will discharge itself.

October 7.—Severe hemorrhage taking place, Dr. Morton ligated the right superior thyroid artery. The next day hemorrhage from the left side was controlled by Monsel's salt with pressure. The amount of nourishment introduced was much increased.

TRANSLATIONS.

INJURIES FROM THE BITES OR STINGS OF SMALL ANIMALS (Dr. M. E. Weiser, *Wiener Med. Presse*, 1874, No. 35).—One morning, in the principal city of Albania, Dr. W. was summoned to see the prima donna of an Italian theatrical troupe which was performing there, and found upon his arrival that she was suffering from some affection of the finger, which increased in severity with such rapidity that she was unable to go on the stage, and was obliged to keep to her bed. The first impression made by an examination of the finger was that it had been attacked by a paronychia, which had spontaneously opened; and this impression was strengthened by discovering, upon inquiring into the history of the case, that there had been a loss of sleep during the previous three nights from the intense pain, which had been at first dull, and, later, throbbing in character. An improvement took place under the use of warm water dressings, to which the treatment had to be limited, since the patient persistently refused to allow an incision to be made; and further examination showed that a similar state of affairs existed upon the other hand. It was then stated by the doctor that it was probable that these affections were caused by the bites or stings of some poisonous animal, and this was confirmed by the entrance of two other members of the troupe, complaining of similar painful swellings in their fingers. It was then found that the members of the troupe had killed many European scorpions and hornets in the foul and badly-kept room upon the floor of which they all slept. On the next day, the "page" of the company, who was the child of the director, was found to be suffering in a similar way. The agreement as to the locality at which the suppuration took place in these different cases was very striking. It was always in the furrow between two of the phalangeal articulations, and upon the volar side of the joint in six of the cases; being upon the dorsal aspect in but one.

In all four of the persons who were the subjects of this accident, the thumb was the part of the hand which was either first or exclusively affected. The trouble lasted about one week, and during the first three or four days the patients suffered severely from pain and loss of sleep. If the affection was left to itself it broke

upon the fourth day, and then, according to its size or depth, resembled either a panaritium in the strict sense of the word, or a simple pustule, of the size of a pea, or perhaps as large as a hazel-nut. This was followed by a sense of relief, and there was soon a real improvement in the state of the patient, manifested by a return of sleep and appetite. The discharge of pus continued of considerable amount, and led to the formation of a loss of substance of circular form, which was but slowly replaced, and left a scar which was visible for a long time. As healing progressed, the epidermis fell off or was removed with the scissors; the newly-formed skin scaled off for some time, and the indurated edge of the cicatrix which was being formed caused much annoyance by the itching which was present in it. At the commencement of this affection it is almost always possible by careful examination to discover a black point, of the size of the point of a needle, situated near the centre of the tumefaction.

In the recent cases in Scutari, Dr. W. thinks that the choice as to their origin lies between the Scorpio Europæus, which is very frequently met with in Turkey, and the hornet (*Vespa crabro*), which is more rarely seen. It is well to be acquainted with the important constitutional symptoms to which lesions of this character give rise, so as not to be deceived by them when their origin is not plainly indicated.

W. A.

TROPHIC AFFECTIONS FOLLOWING CEREBRAL LESIONS.—Dr. A. Muron, in the *Gaz. Méd. de Paris*, September 26, 1874, calls attention to certain trophic affections hitherto undescribed, which may appear in the course of the evolution of cerebral lesions, particularly cerebral hemorrhage. These affections are of two kinds,—external and internal.

Under the term "external affections" Dr. M. includes lesions of the parotid characterized by suppurative inflammation, of the region of the buttocks characterized by a simple congestion of the integuments and subcutaneous cellular tissues, and of the knee characterized by a hypersecretion of synovial fluid.

Dr. M. cites, as belonging to this class, a case in which cerebral hemorrhage into the right corpus striatum was followed six days later by severe inflammation of the parotid, going on to suppuration, which was only cut short by the death of the patient.

At the same time the region of the buttocks on the paralyzed side was observed to be red and vascular, but without pustules or scars, while the corresponding knee was slightly tumefied, and there was probably a certain degree of hydrarthrosis.

Under the term "internal trophic affections" Dr. Muron includes congestion of the kidney of the affected side, and he gives several instances of this class of cases. The first was that of a patient who had suffered a bullet-wound of the brain, involving the middle of the left hemisphere and the third frontal convolution.

Post-mortem examination showed the right kidney considerably enlarged and deeply congested, but without any degeneration of the uriniferous tubules.

A second case is that of a patient 50 years of age, who had suffered two months from left hemiplegia.

Post-mortem examination showed the hemorrhagic clot to have been formed at a point external and posterior to the corpus striatum. The left kidney was found to be at least one-fifth larger than the right, and much firmer in consistency, while very decided congestion was evidently present. That this congestion was recent was shown by the absence of granular fatty degeneration of the uriniferous tubules, while the cellules of the capillaries were more or less completely infiltrated with numerous pigment-granules. Other cases of a similar nature are referred to, and the paper is concluded by a description of a case of clinical

interest, in which cerebral hemorrhage followed by left hemiplegia without loss of intelligence was accompanied by temporary albuminuria. This latter disappeared with the gradual amelioration of the paralysis.

A. V. H.

THE INFLUENCE OF MERCURY ON THE RED AND WHITE BLOOD-CORPUSCLES.—Dr. Wilbouchervitch, of Moscow, publishes the results of a series of experiments on this subject in the *Archives de Physiologie*, July–September, 1874.

After giving the details of a large number of carefully performed experiments, Dr. W. states his conclusions as follows:

1. Mercurial preparations in small doses produce during a certain period, in individuals affected with syphilis, an increase in the red globules of the blood, and at the same time a slight diminution in the number of white globules (hypoglobulie). The diminution in quantity of the blood-globules due to the syphilitic disease is arrested, and the blood returns to its normal condition.

2. Too long continued mercurial treatment gives rise to the same conditions as when the drug is administered in large doses; that is, it brings about rapidly, in animals, hypoglobulie, diarrhœa, etc.

3. Consequently, it is very important to know exactly at what moment the mercurial treatment should be suspended, and this moment can only be ascertained by enumeration of the blood-globules.

4. It is necessary, then, to divide the mercurial treatment into several periods. At first, that condition of hypoglobulie which coincides with the early manifestations of syphilis should be combated by mercurial preparations in small doses until a diminution in the number of red globules is noticed. At this point treatment is suspended until hypoglobulie again occurs. Then mercury is once more administered, and this is again suspended when diminution of the red globules is once more reproduced.

Dr. W. concludes by stating that he has only observed thus far the influence of mercury in the primary lesions of syphilis. The study of the same influence in secondary and tertiary lesions he leaves until some future occasion.

A. V. H.

UNION BY THE FIRST INTENTION FOLLOWING A WOUND MADE BY A CIRCULAR SAW.—The case occurred at the Hôpital Cochin, under care of M. Despris, and is reported in the *Gaz. Hebdom.*, September 25. The patient was wounded in the right index-finger by a circular saw, the incision being made so sharply that the articulation of the third phalanx was opened without the bones having been injured.

The wound was so deep that only a posterior flap remained uninjured. There was very little hemorrhage, and the wound was hermetically sealed by means of strips of diachylon plaster, which were continued to the root of the finger.

The next day the wound was examined, when it was found that no blood had escaped from under the strips of plaster; some pain was experienced. On the third day the pain was more severe, but the plaster strips were retained in position. On the fourth day union had taken place, but the strips were prudently allowed to remain a week longer.

At the end of that time they were removed. The wound had closed without a drop of suppuration, leaving a linear scar. Movements of the finger at first caused pain, which gradually disappeared.

A. V. H.

CAUSES OF DEATH OCCURRING AFTER THE ABLATION OF NASO-PHARYNGEAL POLYPI.—Dr. Pozzi read at the recent meeting of the Association Française (*Gaz. Méd.*,

September 26) a memoir relative to observations made in the service of Professor Verneuil. A patient suffering from a nasal polypus, and who had been operated upon for the second time on account of a return of the disease, supported the operation without any unusual symptoms, but died suddenly after having been replaced in his bed. The author adds other cases of similar nature and terminating fatally, where, as in this instance, destruction of the inferior wall of the cranium was observed, with thinning, fissures, and perforations, through which prolongations of the polypus passed in to the brain.

Death supervened unexpectedly, and by syncope, within a few hours subsequent to the operation, though there had been little loss of blood, and no accident of any kind followed the procedure.

M. Pozzi thinks that thinning of the base of the cranium and the connections of the polypus with the brain may predispose to syncope and sudden death. And on the other hand he has learned by experience that hemorrhages in the carotid or cerebral systems are much more quickly followed by death than in the case of hemorrhages from the arteries of the trunk or members, even where the loss of blood may be less. A. V. H.

PAINFUL ANGIOMATA.—At the same meeting, Prof. Trélat made some remarks on these tumors. Angiomas differ from the tumors called erectile, which should be called cavernous angiomas; the simple variety only contain blood-vessels. Formerly, when a small tumor was painful, it was called a neuroma; but painful neuromata are very rare, while indolent tumors of the nerves are quite common.

Prof. Trélat cited three cases of very painful tumors supposed to be neuromata, but which were afterwards found to be purely vascular; two were subcutaneous, one was submucous and existed at the vaginal orifice. In these three cases ablation was practised, which was followed by cure. Again, a case was cited where severe pain was caused by contact of the median nerve with vicious callus of the bones of the fore-arm; the nervous surface which had been in contact with the bone had become smooth, flattened, and of a ganglionic appearance. Resection of a part of the diseased nerve, resection of the bone, and re-setting the member, were followed by immediate cessation of pain and rapid cure. A. V. H.

SURGICAL TREATMENT OF OZÆNA WITHOUT PRODUCING DEFORMITY OF THE FACE.—Dr. Rouge, of Lausanne, has devised and executed the following operation. The patient being placed under the influence of an anæsthetic, the head inclined to the right, the upper lip is raised as high as possible. The gingivo-labial ridge of the first molar is then, on the right, incised to the left. All the tissues being divided, the anterior nasal spine is reached, and then the septum is detached from its base.

It is now possible to introduce the finger into the patient's nose and to explore the nasal fossæ.

If necessary, a still larger way may be opened by dividing the cartilages of the *alæ nasi* at their maxillary insertions.

In nine cases operated upon by this process, it was possible to extract sequestra, to scrape the bone, and to cauterize fungosities. Cure followed in every case save one. Hemorrhage, somewhat abundant in a single case, was never sufficient to cause anxiety or to give occasion for the use of ligatures or hæmostatics.—*La Trib. Méd.*, July 19, 1874. A. V. H.

ERUPTION FROM THE BROMIDE OF POTASSIUM (Dr. J. Schwarz, *Wiener Med. Presse*, 1874, No. 37).—Owing to the well-established value of the bromide of potassium in diminishing the activity of the brain and spinal

cord, and more especially in lessening reflex irritability, it is widely administered. It is ordered with especial preference in a large majority of nervous diseases, whether they are accompanied by disturbance of motor or sensory function. When visible results are to be attained from its use, its administration must, of course, be kept up in considerable doses during a protracted length of time. The continuance of large doses is advised against by those who are authorities in such matters, for they say it may be followed by unpleasant symptoms both in the nervous system and on the cutaneous surface. The recorded observations of symptoms coming under the latter head are much more numerous than those which belong under the former.

A. Voison, in 1868, published his observations, and called the attention of physicians to the changes upon the skin which followed the use of the bromide. S. Weir Mitchell followed him in 1870, and in 1873-4 Isidor Neuman added his observations, and Dr. Schwarz wishes to enrich the literature of the subject by the following reports of two cases:

1. A woman, aged about 56 years, had suffered, according to her own account, for many years from attacks of vertigo, which were accompanied by severe cephalic pains, which, starting from the occipital region, extended over the vertex to the forehead. These not alone deprived the patient of her rest at night, but also rendered her days miserable. She stated that she had derived some temporary alleviation from quinine and caffeine, but no permanent good results had been attained by these means. When she was examined in March of this year, she was found to be a well-nourished person, with pretty strongly developed bones and muscles. The heart-murmurs were normal, and nothing abnormal was perceptible in the organs of respiration.

The pulse was 100, the temperature of the skin above 38.5. The patient complained of pain in the head and in all her limbs, which were periodically attacked by an involuntary trembling, followed by chattering of the teeth. As, according to her account, there was a periodicity about these attacks, one-half scruple of quinine was administered during the interval.

These attacks ended with a deep inspiration, and immediately afterwards the patient manifested great sensibility to light and sound, and hyperæsthesia of the skin. The tongue, when protruded, went somewhat towards the left, and the speech, which was at first somewhat indistinct, became regular again after some minutes. The patient was ordered, in conjunction with hydropathic treatment, the bromide of potassium, one drachm a day. After six days of this treatment the epileptiform attacks became less frequent, so that two or three, and even fourteen, days passed without the occurrence of a paroxysm; and, although the treatment was continued, the visits of the physician were discontinued. In the fifth week of the treatment Dr. S. was called to the patient on account of a cutaneous eruption which had made its appearance. The exanthema manifested itself on the forehead in the form of tubercles of the size of a lentil; tubercles of the same character, but larger, were also seen upon the fore-arm and leg. These were found to be hard, and of a conical shape, and surrounded by an infiltrated wall. The eruption was of a pale-red color, and caused an annoying itching. Cool lotions alleviated this symptom to some extent, and, as the paroxysms no longer occurred, the administration of the bromide was suspended. In the course of sixteen or eighteen days the eruption had undergone a retrograde metamorphosis, which began in the lesser and extended to the larger tubercles. On the places where these latter had been seated were blotches of a faint yellow color.

The largest conical tubercle, which was situated on the outer aspect of the left fore-arm, at the end of four

weeks had not been entirely absorbed. The epileptiform attacks began again, but with less severity, and the administration of the bromide in doses of one-half drachm per diem was resumed.

After eight days of this treatment, the large tubercle referred to above began to enlarge, and on the twelfth day from the commencement of this second course of the drug the eruption reappeared. The large tubercle occasioned pain, the smaller ones gave rise only to itching. The use of the bromide was again suspended; and as the general condition of the patient was much improved, she was sent to a thermal spring. W. A.

(To be continued.)

TORTICOLLIS AND MUSCULAR PATHOLOGY.—According to Dr. Dalby, who read a paper on this subject at the recent meeting of the Association Française (*Gaz. Méd.*, September 26), true muscular contraction is due to a lesion of the nervous centres, determining a permanent retraction in which the muscular fibre becomes atrophied and subject to fatty degeneration.

Other forms of contraction which are only apparent consist in a faulty position maintained on account of pain. Under anæsthesia, these false contractions whose effect is thinning and atrophy of the muscle disappear entirely.

Torticollis is often articular, the lesion being seated in the articulations of the cervical vertebræ, particularly that of the atlas and axis with the occipital bone. In torticollis of articular origin tenotomy is useless. The treatment should consist in manipulation, and particularly in the application of hydrotherapy and electricity, but not of induced electricity. A. V. H.

HYPERTROPHY OF THE EAR AFTER EXCISION OF A PIECE OF THE SYMPATHETIC NERVE IN THE NECK (Dr. Bidder, *Centralblatt für Chirurgie*, 1874, No. 7).—One month after resection of the left sympathetic nerve in the neck of a gray, half-grown rabbit, the ear of the same side became much longer and broader than its fellow, and was at the same time hyperæmic and warmer. The left pupil was half the size of the right, projected much farther from the orbit. Bidder thinks that the increased growth of the ear is due to an increase of the quantity of nutritive material supplied to the parts whence the controlling influence of the sympathetic nerve has been removed. W. A.

THERAPEUTIC NOTES.

INFLUENCE OF SUBCUTANEOUS INJECTIONS OF MURIATE OF MORPHIA IN DYSPNŒA.—1. Injections of muriate of morphia seem to possess a real efficiency in all those cases where dyspnœa constitutes an element of the disease or supervenes as a complication.

2. Diminution of the number of inspirations under the influence of the morphia explains the constancy of the results obtained.

3. The effect produced is also more sure and rapid when injection is made into the thoracic walls.—Dr. A. Renault, in *La Trib. Méd.*, Aug. 16, from *Union Méd.*

ADMINISTRATION OF IPECACUANHA BY INJECTION.—Dr. Cheuppe (*La Trib. Méd.*, Aug. 16, from *Bull. de Thérap.*) claims very satisfactory results from this method of treatment in tuberculous diarrhœa and cholera infantum. By the use of this remedy gastric complications are avoided, while the injections may be continued during long periods without disturbing digestion or enfeebling the patient. Under these circumstances ipecac seems to act by absorption.

TREATMENT OF PRURITUS VULVÆ.—Lotions containing alum may be used according to the following formula:

R Aluminis, 3i;
Decoct. hordei, Oiv.—M.

Apply three or four times a day.

M. Hardy employs the following formula:

R Hydrarg. bichlor., gr. xv;
Aquæ destillat., 3iii ℥v;
Alcoholis, q. s.—M.

Sig.—A tablespoonful in a tumbler of tepid water. In applying, care should be taken not to rub the parts.

In that form of pruritus vulvæ which so often accompanies pregnancy, Dangan employs the following formula:

R Zinci oxid., 3i;
Sodii borat., 3ii;
Cerat. simpl., 3iv;
Ol. amygdal. dulc., q. s.;
Morphiæ muriat., gr. i.—M.

M. Bazin prescribes in pruritus the following liniment:

R Liq. calcis,
Glycerinæ, aa 3viiss;
Ol. amygdal. dulc., 3i 3vi;
Ol. rosmarini vel gaultheriæ, gtt. v.—M.

He also occasionally makes use of the following formula:

R Glycerinæ, 150 grammes;
Tinct. opii, 4 grammes;
Ol. rosmarini vel gaultheriæ, gtt. v.
—*L'Abeille Méd.*

EXTERNAL TREATMENT OF URTICARIA.—The following applications are used by Dr. Hardy at the Hôpital Saint-Louis, in connection with appropriate internal remedies:

Lotion of Chloroform—

R Chloroformi, 3iiss;
Alcohol., 3iiss.—M.

Lotion of Corrosive Sublimate—

R Hydrarg. bichlor., gr. iss ad iii;
Aq. destillat., 3iii ℥v;
Camphoræ, q. s.—M.

Sometimes starch-powder, alone or in the following combination:

R Amyli, 3x;
Zinci oxid., 3ss;
Camphoræ, 3ss.—M.

Apply morning and evening. Vichy water, alkalies, etc., may be serviceable at the same time to correct acidity of the stomach.

IN HABITUAL CONSTIPATION.—

R Resin. podophyll., gr. ii;
Ext. hyoscyami,
Sapo. castil., aa gr. viii.—M.

Div. in pil. No. xxiv.

Sig.—One at night.

This formula is recommended by Dr. Marchant as a convenient one to avoid the griping sometimes caused by podophyllin, and to exercise a beneficial effect on the condition of the bowels leading to constipation.

CATARRH SNUFF.—Dr. E. C. Mann, of New York, recommends the use of a snuff composed of equal parts of finely pulverized camphor and white powdered sugar as an adjuvant to the various injections and sprays employed in the treatment of nasal catarrh.—*New York Medical Journal.*

PHILADELPHIA
MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

THE PATHOLOGICAL SOCIETY.

THERE lies on the table before us a very substantial evidence of Philadelphia medical earnestness, in the form of a handsome volume of about two hundred and fifty pages, entitled "The Transactions of the Pathological Society of Philadelphia." The book represents a very large amount of good work, and is a valuable contribution to medical literature. The labor that has been given by the "Committee upon Morbid Growths" is very great, and when its voluntary character is remembered, and the fact borne in mind that it can bring but little direct reward to the members of the committee, save the satisfaction of a good conscience, we can well afford to the laborers the praise they so highly deserve. Our Society is the only one of the kind on this continent which publishes a "Transactions;" and, in concluding this notice, we express a desire that it shall not cease from its labors, but that every fall shall bring with it to our editorial table a volume even larger and richer than the present.

CINCHONA CULTIVATION.

WE desire to call the attention of the Committee of the American Medical Association upon the above subject to the *Cinchona Crispa*, which ought to be capable of cultivation on some of our Southern Alleghanies if the account of it published in the *Overland Ceylon Observer* be cor-

rect. It is stated that it resists frost very well, and that, in fact, Mr. Cross found it growing on the summits of the highest mountains around Loja, where the temperature occasionally falls to 27°.

A SUBSTITUTE FOR STEAM.

UNDER the name of carboleum, Dr. Beins, of Groningen, describes in the *Isis*, a Dutch journal, a new invention, which he claims is superior to steam for many motor purposes. He has found that when a bicarbonate of sodium or potassium is heated, dry or in solution, in a closed flask, it yields up a portion of its carbonic acid, which condenses in a cool chamber, so that liquid carbonic acid (carboleum) can be distilled out of those substances at a temperature of from 300° to 400° C. He proposes the use of the liquid for many purposes, such as various stationary and locomotive engines, formation of electric light, etc., etc.; claiming that it is both safer and much cheaper than steam. As an engine with a store of carboleum is independent of the atmosphere, the invention is especially applicable to submarine work, and we believe that the Dutch government is investigating the practical use of the liquid in this direction. Freezing-machines worked by carboleum are said to produce ice much more cheaply than does any method hitherto invented. If this be so, artificial ice must in the course of a few years largely replace the natural product; and if the doctor's calculations be correct, gas will be largely superseded by mechanical electric lights.

As an instance of the excessive fear of blood-letting which affects the profession at the present time, Dr. Rawdon Macnamara gives, in the *London Lancet*, the following incident:

"Some time ago I had a patient under my care suffering under urgent symptoms of impending suffocation consequent upon acute inflammation of the upper portion of the larynx and adjacent parts. A consultation was held of surgeons of great operative ability and also of great experience. All were willing to sanction my opening the trachea, but not one would sanction my opening a vein at the bend of the elbow. However, not being as thoroughly impressed as perhaps I should have been with the importance of the doctrine of the change of type in diseases, I insisted upon bleeding my patient; and never shall I forget his sense of relief as ounce after ounce escaped into the cup, until at last he exclaimed, 'Thank God, I can breathe now as well as ever I did;' and from that out, his convalescence was uninterrupted."

We think Dr. Macnamara is right in suspecting that there are many surgeons who have performed every brilliant feat in the wide range of surgery, but who have yet shrunk from doing the simple operation of venesection. In a very wide experience during the last fifteen years in the hospitals of this city, we have known of but three cases of bleeding,—two having been under our own care.

CREMATION.—It is stated that the municipal authorities of Berlin have recently performed cremation with perfect success, and at a very trifling cost, by the use of gas. In half an hour the softer part of the body had almost entirely disappeared, and in another half-hour the bones had been almost wholly consumed. The skull was then in fragments, and scarcely any part of the remains indicated that they had helped to form a human body.

Dr. Reclam read, at the recent International Sanitary Congress, a paper upon the use of the process after great battles, describing a new apparatus, by means of which a horse can be completely consumed in two hours at an expense of about one dollar. He stated that by his method the horses and men left dead at Gravelotte might have been reduced in four days to a heap of white ashes.

We judge that there are about six hundred medical students in this city. It would be a great blessing if the smaller schools generally were deserted and the only doors of entrance to the profession were the larger institutions. Centralization is a necessity in medical education, if the non-practical chairs are to be properly filled. In it, to our vision, is the only chance of our having in this country professional, not amateur, physiologists, medical chemists, etc.,—men who distinctively devote their lives to such work.

The clinics at the Philadelphia Hospital are very largely attended this winter. We counted three hundred and twenty-five students at a recent lecture.

REVIEWS AND BOOK NOTICES.

GERMAN UNIVERSITY LIFE. By HEINRICH STEFFENS. Translated by WILLIAM L. GAGE. J. B. Lippincott & Co., 1874.

We lay down this little book at the conclusion of its reading, feeling warm indebtedness towards both author and translator for what is so like a personal introduction to many noble, manly, and world-famous people. Whoever knows of Fichte and Schelling, of the Schlegels, of Schleiermacher, of Goethe, and of that class of grand German thinkers whose influence is felt so markedly by our age, will enjoy a peculiar satisfaction in being brought into such direct relation with the everyday life of the scholars.

A marked charm of the volume lies in the almost boy-like simplicity with which its story is told: indeed, it will be to wonder at if many a reader shall not be found disposed to congratulate himself that he is of greater worldly acumen than Steffens,—pitying, perhaps, the Herr Professor.

"German University Life" is a volume that will interest more particularly the scholar. There is not one paragraph in the whole book which makes entertainment for the reader who would turn its pages seeking for adventures in the *bier-garten*. The associations lie exclusively with that class whose search is after knowledge of *die Bestimmung des Menschen*. We quote a single passage; it is the key-note of the work: "Praise and blame are both equally harmless. Whoever has a work to do which absorbs the energies of his whole being, is spending his happiest days. He can build on in peace, and cherish the thought that he is doing a work which shall not perish; if his work is to him something sacred and precious, he can not only bear attacks with indifference, but can even be patient with his weaknesses, while he seeks to battle with and overcome them."

We commend "University Life" as a book to be enjoyed when the evening fires are lighted. J. E. G.

THE TONER LECTURES.—Lecture III. ON STRAIN AND OVER-ACTION OF THE HEART. By J. M. DA COSTA, Professor of the Practice of Medicine in Jefferson Medical College, Philadelphia.

This lecture of Prof. Da Costa is an interesting, well-written, and, we may add, in many respects original brochure, showing that very many cases of heart-disease are in no wise due to rheumatism, or even to endocarditis, but are developed as the results of functional excitement and over-use. It is well known that various occupations predispose to cardiac disease, but excessive dancing as productive of heart-affections has not, that we are aware of, been previously dwelt upon. Baseball players the doctor has found singularly free from heart-trouble, and he believes that the constantly recurring intervals of rest in the game especially protect its votaries.

SELECTIONS.

BENEDIKT ON THE ANATOMICAL CHANGES IN HYDROPHOBIA CANINA.

THE long-continued epidemic of last winter has, through the assistance of his colleagues of the Imperial Veterinary School in Vienna, furnished Dr. Benedikt (*Wiener Mediz. Presse*, June, 1874) with numerous preparations from the brain and spinal cord of different animals that had been attacked with rabies. Before describing these, the author discusses the difference presented by the disease as seen in man and in dogs, which has also a special significance with reference to the anatomical appearances. In both the disease begins with a restless melancholia. In the dog this passes into raving madness, while in man this form of mental affection is wanting. In man illusions and hallucinations take but small share in the symptoms, while in dogs they are plainly a prominent feature. In man there is the greatest degree of hyperæsthesia, with highest possible susceptibility for convulsions; in dogs, diffused paralysis and aphonia are among the earliest and characteristic symptoms. In the human being there is the most extreme reflex excitability in the movements of deglutition, so that not only the raising a glass to the mouth, but even the sight of fluids, will induce violent spasmodic action in those organs; whereas in dogs there is a paralysis of deglutition for fluids. In man the severest spasms of

the respiratory muscles are present, so severe as sometimes to cause asphyxia. Such spasms are not observed in dogs, which die generally from exhaustion.

Dr. Benedikt has studied the pathological changes by making seven separate vertical sections through the hemispheres in dogs, and has observed such plain and striking pathological changes as could, he observes, only have been previously overlooked by reason of an imperfection of the methods of investigation.

In the first place, there is noted an abnormal distention of the meningeal vessels, and the accumulation around them, and in the meshes of the pia mater, of inflammation-corpuscles, together with a nucleolated exudation. This exudation is strongly refractive of light, is colorless, and under high magnifying powers is seen to consist of punctiform nuclear substance (granular disintegration). Striking changes are observed in the gray matter of the convolutions, and in various parts of the nervous centres. One of the coarser changes observed was the presence of numerous holes, or spaces, which, when magnified eighty or ninety diameters, were seen to be filled with a material which also refracted light. This mass, under the high powers of the microscope, consisted of a granular or nuclear substance, in which were single hyaloid and colorless corpuscles, of the size of a distended nucleus of a blood-corpuscle. Inflammatory corpuscles were to be seen in both these masses. In the larger spaces, nerve-cells also were found. Dr. Benedikt further describes what he calls a peculiar condition of the hardened brain, especially in the finer sections. The slightest pressure forced out upon the surface shining masses, which under the microscope proved to be myelin (colloid? *Rep.*). These masses were often found lying detached on the surface of the section, and presented a greenish lustre. The author states that he has seen the same in the spinal cord of a horse that had suffered from rheumatic tetanus, and that he had regarded it as a softening and chemical alteration of the substance of the spinal cord.

The signs of inflammation are not presented everywhere in the pia mater, but only in certain parts. The distribution of these in the gray matter and in the central white substance throws a new light, according to Dr. Benedikt, upon the nature of the "granular disintegration." (A diagram intended to illustrate this point is given.) From what he has noted, it is concluded that the pathological process in this disease consists in acute exudative inflammation, with hyaloid degeneration, which doubtless arises from the exudative infiltration of the connective tissue. It is characteristic with reference to these inflammatory products that the attack, in man at least, is ushered in with rigors. The hyperæmia and nuclear proliferation is concurrent with that form of diffused inflammation which Lockhart Clarke has designated as "granular disintegration," and so far, the author considers, the anatomical obscurity of this disease is dispelled. The morbid process, in man, is doubtless essentially the same. The usual post-mortem appearance is congestion and softening, which may have no especial value except as following asphyxia.

Dr. Benedikt states that there are in literature only two trustworthy reports,—viz., by Meynert, who found much the same appearances as the author. The spaces or holes are regarded by Meynert as being the result of the hardening of the brain-substance. In two other cases Meynert found hypertrophy of the connective tissue in the posterior columns, with molecular and amyloid degeneration in the anterior columns. The nerve-cells of the cortical matter had also undergone partly molecular and partly sclerotic change.

W. B. KESTIVEN.

—*London Medical Record*, September 30, 1874.

BOURNEVILLE ON THE THERAPEUTIC AND PHYSIOLOGICAL PROPERTIES OF BROMIDE OF CAMPHOR.

BROMIDE of camphor, or, to use the nomenclature of MM. Maisch and W. A. Hammond, monobromide of camphor (*camphre monobromé* of M. Wurtz), is a substance in which an equivalent of the hydrogen of camphor is replaced by an equivalent of bromine. This new combination is thus very rich in bromine, since it contains of this element more than a third of its whole weight. It is a perfectly definite substance, and, when well prepared and pure, it is white, of velvety appearance, and crystallizes in elongated prisms, which are sometimes of a good size. These prismatic needles are often united at their bases, and thus form thick tufts of great beauty. The odor of the bromide of camphor is rather penetrating, and resembles that of camphor and mouldy wood in conjunction.

The first researches on the physiological action of bromide of camphor were made by Dr. Bourneville, and were communicated by him to the Société de Biologie on June 13. This investigator experimented on guinea-pigs, rabbits, and cats. The results of his experiments induced him to assign the following physiological properties to this new drug. Bromide of camphor lessens the number of the pulsations of the heart, and determines a contraction of the auricular vessels in guinea-pigs and cats; it diminishes the number of inspirations, and lowers the temperature in a regular manner. When the bromine is given in a poisonous dose, this diminution of temperature becomes more and more marked until death ensues. In the cases which recover, the diminution of temperature is succeeded by an increase, which continues until the initial figure is reached. The rise of the temperature, however, occupies longer time than its fall. Bromide of camphor has incontestable hypnotic properties, and appears to act chiefly on the cerebral system. The nervous system appears not to accommodate itself to the influence of this drug, since a prolonged use of it, in the case of cats and guinea-pigs, caused emaciation.

Starting from these physiological conclusions, the results of his experiments, M. Bourneville deduces from them the therapeutic properties of bromide of camphor. He considers that the use of this agent is indicated whenever it is necessary to produce decided calming of the circulation, and especially for the cerebro-spinal nervous system. The antispasmodic properties of bromide of camphor are, in M. Bourneville's opinion, clearly proved. M. Deneffe, of Ghent, is, we believe, the first person who employed bromide of camphor as a therapeutic agent. He found it of great service in the case of a man aged thirty, who was suffering from delirium tremens, accompanied by tremblings, excitability, insomnia, and visual delusions. The patient improved rapidly, and a thorough recovery followed, unattended by relapse.

Dr. W. A. Hammond, of New York, employed bromide of camphor prepared by M. Maisch, Professor at the College of Pharmacy in Philadelphia, in the form of beautiful free crystals slightly tinted with yellow. Dr. Hammond mentions instances where the convulsions of children, attacks of inveterate hysteria, lasting from five to twelve days, and headache, consequent on mental excitement or excessive study, were cured by the use of this drug.

Dr. Bourneville made his therapeutical experiment at the Salpêtrière, under the direction of M. Charcot. The form of the drug administered was the same as that which has been employed up to the present time in all the hospitals of Paris,—Dr. Clin's bromide of camphor dragées. In addition to the physical properties of bromide of camphor already mentioned, its

characteristic odor and disagreeable flavor, it may be noted that it is insoluble in water, and changes when exposed to the air, so that the dragées are the best form in which to administer it. Each dragée contains exactly ten centigrammes ($1\frac{1}{2}$ grains) of the bromide of camphor, covered by a thin coat of sugar, which preserves the drug, masks both its odor and flavor, and renders it easy of deglutition. These dragées become rapidly disintegrated in the stomach. Among the cases already published we find the following:

In one case, a woman aged sixty-two, suffering from heart-disease attended by insomnia, twenty centigrammes only (two dragées) were efficacious. In the case of a woman aged forty-six, who was suffering from progressive locomotor ataxy, in whom insomnia alternated with disturbed sleep, troubled by nightmares, it was necessary, in order to obtain a decided improvement, to administer eighty centigrammes (eight dragées). A woman aged forty-six, who for six years suffered from chorea, who had not been able to walk for a year, and was tormented by such incessant and violent movements that they threw her out of her bed, and who was also unable to sleep, had administered to her as high a quantity as one hundred and twenty centigrammes (twelve dragées). Her sleep became calmer, she remained quietly in her bed, could walk a little, and often remained fifteen or twenty minutes undisturbed by choreic movements.

Three women under the care of M. Charcot, of the respective ages of fifty, sixty, and sixty-seven, were attacked by paralysis agitans, and pronounced incurable. They took from twenty centigrammes to one gramme (three to fifteen grains) of the bromide of camphor, daily, in quantities varying from one to ten dragées, in progressive doses. A marked amendment followed.

Bourneville (*Progrès Médical*) has submitted the efficacy of bromide of camphor to a severe test by choosing as a field for his experiments a hospital for incurables. If it succeeded in these obstinate cases, still greater was the probability that it would act beneficially where the conditions were more favorable and the illness of more recent origin. A patient in the Hôpital de la Pitié, twenty-four years of age, suffering from acute rheumatism, was attacked by chorea in the left arm. He was cured in five days. The dose was sixty centigrammes (nine grains) daily, given in six dragées.

In the same hospital, a woman aged twenty-two was attacked by violent hysterical chorea, with hysterical vomiting. The dose given was first forty, and then sixty, centigrammes daily. Her cure was rapid.

A young woman, a patient in the Necker Hospital, suffering from induration with insufficiency of the mitral valve, showed symptoms of poisoning from the first day digitaline was administered to her. The digitaline was discontinued, and the bromide of camphor substituted. The heart-beats diminished in frequency and became regular. The medicine was relinquished, and the improvement obtained continued the same a fortnight later.

A man in the same hospital, presenting the same conditions, received equal relief.

A young woman, suffering from nocturnal incontinence of urine, had taken bromide of potassium during fifteen days without any amendment. Four dragées of the bromide of camphor cured this painful infirmity, at least for the time being. The patient is still under treatment.

A patient who was tormented by nervous cough, which entirely deprived her of sleep, took two dragées, night and morning, and the symptoms were abated in a few days.

At the Cochin Hospital a case of paralysis agitans

was considerably calmed by a daily dose of four dragées. The patient was a woman, about forty years of age.

At the present time our knowledge of the physiological action of the bromide of camphor, and of its value as a therapeutic agent, is imperfect. It is, nevertheless, evident that the administration of this drug has been followed by incontestably beneficial results, which have been corroborated by observation in a number of the hospital wards. Bromide of camphor is a well-defined substance, having a characteristic crystallization, smell, and flavor; and a powerful sedative both to the nervous system and circulation, acting as a hypnotic and regulating innervation.

It would be premature to specify the precise dose which ought to be administered. In the generality of ordinary cases it has been given to adults in doses of from twenty centigrammes to one gramme, a dose two or three times during the morning, a dose before dinner or with it, and, finally, another before going to bed. The dose naturally varies according to the illness and the special symptoms presented.

E. LAWSON.

—*London Medical Record.*

GLEANINGS FROM OUR EXCHANGES.

WOUND OF NECK AND LARYNX—RECOVERY (*Edinburgh Medical Journal*, September, 1874).—Dr. Joseph Bell reports the case of a man who had received a fearful wound of the neck by the accidental falling of a scythe. The cut extended nearly from ear to ear, was nine inches in length, and, passing through the larynx, divided the thyroid cartilage in the most complete manner, so that not only were the two halves separated in the middle line, but each half was cut transversely across by a ragged wound; a flap with inverted edge and its convexity upwards consisted of skin and platysma; the sterno-mastoids were notched at their edges; the sterno-hyoids were both divided transversely; the great vessels and the œsophagus had escaped. All the bleeding points were at once tied, and then tracheotomy was performed, and a tube inserted in the usual place. This not only gave access of air, but also acted as a drain to the flap, which had been so cut as to retain all discharges. The severed portions of the thyroid cartilage were then brought into accurate apposition with catgut sutures, which were all passed in the different directions before any of them were tied. The whole of the rest of the wound was then closed, and the patient was placed in a large, airy room, with a good fire and plenty of steam. In three days the bulk of the wound was healed, but once or twice he had bled rather freely from the tube; the blood, which was recent, seeming to come from the mucous membrane of the larynx itself. There were also here and there, in both lungs, crepitant râles, due, doubtless, to the presence of clotted blood, and perhaps to the breaking up of clots of blood in the lesser bronchi. There was a little frothy grumous discharge from the tube. He was ordered turpentine stupes to his back, and to be well fed with milk and beef-tea. In two weeks the tube was removed, and two weeks later the whole wound was healed, the tracheotomy wound was almost entirely closed, and his voice was a little hoarse, but was improving daily.

SLIGHT INJURY TO LEG, FOLLOWED BY SUDDEN DEATH FROM THROMBOSIS (*The Lancet*, September 19, 1874).—Mr. A. B. Shepard reports the case of a healthy man, æt. 49, who accidentally abraded his left shin, the wound on which almost entirely healed under

ordinary treatment. On the twenty-first day after the accident, he fainted and fell. Three days later, he had a rigor, followed by well-marked signs of simple pleurisy on the right side. Six days later he fell down while dressing, and died.

The autopsy was made forty-eight hours after death. There was most extensive decomposition of the head, neck, and upper extremities, the superficial veins being much discolored. There was no great decomposition of the body externally below the level of the diaphragm. All the organs were healthy, but very much decomposed. The blood throughout the body, with the exceptions noticed below, was fluid. Coiled up in the apex of the right ventricle were three moulded clots, one showing most beautifully the impression of vein-valves. Two of these clots exceeded seven and one-fourth inches in length each. Only one very small clot, soft and recent, was found in a branch of the pulmonary artery. The subclavian, jugular, iliac, and femoral veins, and the vena cava, were carefully examined. The left internal saphena was removed from two inches below the original wound to its entrance into the femoral, and the latter itself to below the popliteal vein. On slitting up the saphena, the coats of the vein below the region of the wound were found to be perfectly normal, semi-transparent, and drying rapidly on exposure to the air. Nearer the wound its coats cut more rottenly, and where the smaller veins from the wound entered it, it was dilated. From this point upwards, its internal coat, as well as that of the veins from the wound and of those dipping down to the deeper vessels, was intensely red, more than blood-stained, swollen, and moist, even after long exposure to the air. The same was the case with the femoral and popliteal veins; the coats of the latter were greatly swollen, and injected a dark, black-currant color; and in the popliteal vein itself lay the débris of a clot, non-adherent to the vessel-wall, and extending for more than three inches from above to below a pair of valves, the same, in all probability, which had left their impression on the clot in the right ventricle.

THE FORM OF THE CAVITY OF THE UTERUS.—Hagemann (*Archiv f. Gynaecol.*, Band v.) has made a series of plaster-of-Paris casts of the interior of the uterus, and finds that the form of the uterus in a new-born child is distinctly bicornuate, a crista media being still visible as a remains of it in the virgin at puberty. Women who have had children, and old people, have still some indication of it in a marked prominence of the walls at the point of entry of the Fallopian tubes. In childhood the uterus is very narrow from before backward. In multipara the transverse diameter, just above the orificium internum, is very considerable. On the other hand, in virgins the cervical canal is half the whole length of the uterus. The cervical canal is widest near its centre. The cristæ of the plicæ palmatæ are situated the one in front and to the left, the other behind and to the right. The retrogressive metamorphosis of the uterus after birth does not affect the whole uterus equally, but chiefly the placental region.—*The Lancet*, September 19, 1874.

EFFECTS OF DIVISION OF THE AUDITORY SEMICIRCULAR CANALS.—Dr. Löwenbey gives the results of his experiments on the semicircular canals in Dr. Knapp and Professor Moos's "Archives of Ophthalmology and Otology," vol. iii., 2, p. 26. He believes they prove the following points: 1. That the derangement of motion following division of the semicircular canals is the result of this injury, and not of an accompanying injury to portions of the brain. 2. That the vomiting observed by Professor Czermak in his experiments was the result of an accompanying injury of the cerebellum.

3. That the derangements of motion are the result of irritation of the membranous canals, and not of paralysis. 4. That the irritation of the semicircular canals produces the convulsive movements *reflectively*, without participation of consciousness. Consciousness participates in these effects only in so far as it gives rise to renewed irritation by inciting the animal to voluntary movement. 5. The communication of this reflex excitation from the nerves of the membranous semicircular canals to the motor nerves takes place in the thalamus.—*The Lancet*, September 19, 1874.

MULTIPLE FRACTURES (*The Dublin Journal of Medical Science*, September, 1874).—At a recent meeting of the Dublin Pathological Society, Dr. Bennet presented specimens taken from a man injured by the falling-in of the roof of a house, and who had sustained the following injuries. A transverse fracture of the lower third of the right thigh bone; an oblique fracture of the right tibia and fibula; an oblique fracture of the lower end of the right humerus; fracture of the sternum at the level of the junction of the manubrium and gladiolus; fracture of every rib on the right side, and of the first three on the left; extensive rupture of the chest-wall with great emphysema; several wounds of the right lung. He survived the accident for three hours.

CASE OF GASTRO-ELYTROTOMY (*New York Medical Journal*, October, 1874).—Dr. Alexander Skene reports a case of pregnancy in a rachitic patient who had gone to full term. When labor began it was found impossible to deliver the child either by version or craniotomy, on account of the narrowness of the pelvis and the œdema of the parts. Gastro-elytrotomy was performed, and the child extracted with ease. Dr. Skene observes that the incision was made through the skin and superficial fascia from the spine of the pubis to the anterior superior spinous process of the ilium, but that this was longer than necessary. The muscles were divided for about two-thirds this distance, the opening thus made being very distensible. The finger was used to raise the vagina at the point where it was opened. The head was seized with the craniotomy-forceps and delivered. This operation, Dr. Skene thinks, should take the place of Cæsarian section, and should be tried in deformity of the superior strait where the child could be saved.

ACETIC ACID IN MUCOUS POLYPUS (*Ibid.*).—Dr. Méplain, of Moulins, gives the history of a man, thirty years of age, who had been afflicted for a month with mucous polypus of the velum palati. The tumor was growing rapidly, and impeded deglutition and speech, and gave rise to considerable hemorrhage. Applications of chromic and carbolic acids, removals with scissors, etc., afforded no relief, the tumor being constantly reproduced. A drop of acetic acid was injected into the polypus, and it immediately began to shrink; a second injection completed the cure, and five months later there were no symptoms of a return of the disease.—*Bull. de Thérapie and Gazz. Med. Ital. Prov. Venete*, No. 9, 1874.

CASE OF OVARIOTOMY (*The Western Lancet*, September, 1874).—Dr. John Scott reports the case of a patient, æt. 34, from whom a large ovarian tumor was removed. She was at the time greatly emaciated, having symptoms of blood-poisoning. There were extensive parietal and omental adhesions to the tumor, and strong fibrous bands attached it to the liver and spleen. Beyond half an hour's pain in the back immediately after the operation, the patient had no suffering whatever, and progressed steadily to recovery, with no vomiting, tympanites, or derangement of the stomach or bowels. A glass drainage-tube was used. Ethyl was employed as the anæsthetic.

MISCELLANY.

MEDICINE IN SWEDEN.—An interesting article on the recent Archæological Congress at Stockholm, by M. Albert Kobin, published in the *Journal de Thérapeutique* for September 25, gives some details respecting the hospitals and medical schools of Sweden. It appears that in that country there are seventy-nine hospitals, containing 4687 beds, receiving an average of from 30,000 to 32,000 patients, with an annual death-rate of about 2000. The expenses of these hospitals amount to about 40,000*l.* per annum. There are nine lunatic-asylums, containing 1210 beds. In 1870, statistical returns showed 9109 lunatics, of which 4666 were men and 4443 women. There were also 3280 blind persons,—1504 men and 1776 women; 5254 deaf and dumb, comprising 2370 men and 1848 women. Stockholm contains seven hospitals, of which the most important is the Clinical Hospital, containing 300 beds. The wards of this institution are small, low, badly lighted, and in a very indifferent order. It is very difficult to ventilate them: they are therefore about to be replaced by a construction on the pavilion plan. At the head of each bed is a small black tablet, on which the clinical clerk writes his chief's remarks every day. The surgeons have begun to use the wadded splints, but find it difficult to give up the use of Lister's bandages, which they have unanimously adopted. In Norway they employ a method of dressing wounds which was used by the Americans in the war of secession. Lint and wadding are replaced by fine tarred oakum, the bandages and other portions of the dressing being impregnated with acetate of alumina. This method of treatment yields excellent results, and Dr. Thaulow, of Christiania, employs it in his wards to the exclusion of any other. The only specialty to be seen in the medical wards is the plan used for the cure of acute affections of the chest, such as pneumonia and acute bronchitis. It consists in making the patient constantly respire air holding in suspension a large quantity of aqueous vapor; the bed being entirely covered with a moderately thick cloth, in which two apertures are made for the renewal of the air. A water vaporizing-apparatus is placed at the foot of the bed, to the level of which the vapor is conducted by a tube. This method of medication, which, however, is not new, is tolerably successful, especially in children's cases.—*London Medical Record.*

RECENTLY, at lunch, meeting Colonel Gordon and Dr. Bellew, just returned from Yarkand, they mentioned that the cold was twenty-six degrees below zero at 18,500 feet, when bed-clothes were welded together by frozen perspiration, which the heat of the body would not thaw, and, as ink and colors solidified, their notes and sketches had to be pencilled. Excepting the accomplished naturalist Dr. Stolicza, who died of symptoms allied to those of sunstroke, depending on cold and rarefaction of the air, all during the year enjoyed excellent health, whilst living on sheep, green tea, and

occasionally horse-flesh, very little liquor or tobacco being expended.—*Indian Correspondence of the Medical Press and Circular.*

CANNIBALS' TASTES.—In the anthropological section of the recent congress at Lille, reported in the *Revue Scientifique* of Sept. 12, one of the subjects discussed at some length was the practice of anthropophagy. M. Broca thereupon made some remarks on the different nature of the flesh of different races. He said that the cannibals, perhaps fortunately for us, do not like the flesh of whites: they find it bitter and salt, whilst, notwithstanding the latter quality, it does not keep well. Their special dainty is the flesh of the negro, of which they like the flavor, and which becomes dry by keeping rather than decomposes by the natural process.—*London Medical Record.*

OUT-OSTRICHING AN OSTRICH.—In another column we have recorded the case of an American girl who died recently from eating clay. We have now to add another victim to extraordinary taste, in the person of a shoemaker, on whose body an inquest was held on Saturday, at Manchester. The post-mortem showed that the stomach contained one pound ten ounces of nails, several pieces of half-inch square iron, and an awl without a handle. The jury returned a verdict of death from peritonitis, in accordance with the medical evidence.—*Medical Press and Circular.*

THE Professor of Materia Medica and Clinical Medicine in the Calcutta Medical College, Soorgo-Coomar Goodeve Chuckerbutty, M.D. Lond., died on the 29th ult., at Kensington, aged forty-eight.

DR. THOMAS NEWHAM reports (*London Lancet*) a case of death from measles in a man aged ninety-three.

M. CLAUDE BERNARD has been chosen Director of the French Academy.

NOTES AND QUERIES.

ERRATUM.—By a curious oversight, Dr. Goodell's name was not appended to the article upon the Preston Retreat which we recently copied. It matters less, however, as every one knows that Prof. Goodell is the head of the institution.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Philadelphia County Medical Society will be held Wednesday, October 28, at 8 o'clock P.M.

Dr. James Collins will read the opening paper.

All regular practitioners in the city are invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 20 TO OCTOBER 26, 1874, INCLUSIVE.

HEAD, J. F., SURGEON AND MEDICAL DIRECTOR.—Relieved from duty in Department of Dakota, to proceed to Boston, Massachusetts, and, upon arrival, report by letter to the Surgeon-General. S. O. 229, A. G. O., October 22, 1874.

DE HANNE, J. V., ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 229, c. s., A. G. O.

SATURDAY, NOVEMBER 7, 1874.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON THE HYPODERMIC USE OF ATROPIA IN MUSCULAR RIGIDITIES, RHEUMATIC AND MYALGIC.

BY J. C. WILSON, M.D.

OF the following cases, one was furnished by the Medical Ward of the Pennsylvania Hospital, where, thanks to the kindness of the attending physician, I had the opportunity of observing the patient and making clinical notes of his condition and treatment. The remainder presented themselves during the past year at the medical clinic of the Jefferson Medical College. I venture to give them to the readers of the *Philadelphia Medical Times* at some length, as they illustrate a disease sufficiently common in this climate, especially among the so-called laboring classes, but which, nevertheless, has not received the attention from writers upon medicine which its frequency and the suffering it occasions demand, and because they at the same time demonstrate most satisfactorily the efficacy of the method of treatment first suggested by Da Costa in the first volume of the *Pennsylvania Hospital Reports* in 1868, in an article "On Certain Forms of Muscular Rheumatism, particularly Wry-neck and its Treatment."

The disease is that painful muscular rigidity known as chronic muscular rheumatism or chronic myalgia in all its forms; the treatment is the hypodermic use of atropia.

Case I.—G. R., aged 17, born in Germany, by trade a shoemaker, had, in April, 1873, an attack of acute articular rheumatism, in which the joints of the upper extremities were affected, and more severely those of the right side. The attack was of mild type; it lasted some five or six weeks. No discernible cardiac lesion resulted. As the articular pains subsided, the cervical muscles began to give trouble. The neck, first on the right side, then on the left, became painful, stiff; the muscles were hard. Motion was limited, and attended by an increase of the pain. Gradually the head was drawn to the left side. The pain, varying in intensity, but constantly present, aggravated by movements, by pressure, and by atmospheric changes, prevented him from work.

On admission to the Pennsylvania Hospital, November 21, 1873, his condition was as follows: Head drawn strongly to the left side, and slightly backwards, the chin being rotated to the left so that it almost rests upon the clavicle. Left shoulder elevated. Pain constant, dull in kind, referred to both sterno-cleido-mastoid muscles, but severer on the left side, where it extends to brow. Movements of all kinds aggravate it. The muscles, both the sterno-cleido-mastoid and the trapezius of the left side, are hard and tender to even slight pressure. The patient is pale; his expression is indicative of suffering. There is no joint-trouble. Appetite fair. Was ordered atropia, gr. $\frac{1}{80}$, by hypodermic injection, over the affected muscles daily.

December 4.—The following note was made: Pain almost gone. Can move the head freely in all directions; carries it stiffly, and a little to the left. There is

still a trifling pain over the upper part of the left sterno-cleido-mastoid muscle, where a little hardness also lingers. The muscles elsewhere feel normal in texture.

The treatment was continued as an occasional injection of atropia, with the addition of ferruginous tonics, the recovery being at this time almost complete.

December 24.—The patient was discharged, cured.

Case II.—J. S. C., aged 65, applied for treatment October 16, 1873. He is a stone-mason, and has been greatly exposed to the weather all his life. States that he had an attack of rheumatism twenty years ago, which affected his legs, and laid him up the greater part of a winter, but thinks he had no swelling of the joints. Since that time has had occasional twinges of pain, and some stiffness of back and legs after working in bad weather. The present trouble began a year ago, with pain in the back of his head. This pain extended into the muscles of the neck, and now extends, he says, down into his throat. The pain is always present, and is aggravated by efforts at motion and by pressure, so that he carries his head very erect, even a little backwards, and to the left. The left shoulder is elevated; the sterno-cleido-mastoid muscle and the trapezius of that side rigid. Cannot turn head to the left, but can to right. Stooping is very painful. The pain is worse at night. Is anæmic, anxious-looking. Has no disease of the heart. No family predisposition to rheumatism. Was ordered extract of belladonna in small doses, repeated till pupils were affected, with quinine and liniments.

After one week of this treatment, no benefit resulted. October 23.—Atropia, gr. $\frac{1}{80}$, daily, hypodermically, in region of affected muscles.

About half an hour after insertion of the drug he always felt a little dull and confused, and had the usual dryness of throat and dilatation of pupils, with later diarrhoea. In no instance anything like redness of skin. During the treatment he did not have to rise at night to void his water according to habit.

There was decided relief of suffering directly after the first injection.

After eight injections the daily use was abandoned, and only one or two more were made at longer intervals.

November 4.—This note was made: Carries head erect; is free from pain; can turn head as much to the left as to the right, with a little effort. A crackling sound is heard when head is suddenly turned to left side; and there is still some hardness of the muscle of left side. Stoops with ease. Sleeps well. Ordered elixir iron, quinine, and strychnine, f3i t. d.

These two cases show, the first, a close and evident, the second, a remote and vague, association with attacks of articular rheumatism. Whether this relation is causative or merely accidental is a question not so readily determined as might at first sight be supposed.

The results of extended clinical inquiries fail to establish the dependence of such cases upon the causes that produce articular rheumatism, or that they occur more frequently in those who are of the rheumatic diathesis than in others. Indeed, as the following case shows, an acute attack of sickness of a wholly different kind may be followed by painful rigidity in a group of muscles prone to it.

Case III.—A. C., a German, aged 17, a tailor by trade, applied December 29, 1873, on account of stiffness and pain in his neck. The trouble began in September, after a "severe cold and inflammation of his throat." It has gradually increased till this time. The throat-trouble, which would appear to have been a transient tonsillitis, has disappeared. His condition is as follows: Constant

but not severe pain, aggravated by every movement, on the left side of the neck. Can rotate head to the right, not at all to the left; efforts to do so occasion very severe pain. Carries head stiffly, and tilted to the left. A little general denseness of muscles on left side of neck, —those lying between the sterno-cleido-mastoid and the anterior border of the trapezius being hardest, that is, the focus of the trouble being in the scaleni muscles. Is pale, suffers from acne, and has two or three enlarged lymphatic glands in the post-cervical region.

Treatment.—Atropia, gr. $\frac{1}{60}$, hypodermically, over point of greatest pain. After some minutes the pain was greatly relieved, and motion to a considerable extent restored. Ordered pil. rhei comp., U.S.P., one at bedtime, daily.

The atropia was repeated every third day till January 6, 1874, when (after four injections) he was free from pain; could move his head with ease, carried it in the normal position, and ceased attending. This case was not a severe one; he worked all through it, sewing on his board. The hardness of the muscles vanished under the treatment.

Twice since, at intervals of months, he has had a slight return of the trouble, which a single hypodermic of atropia, gr. $\frac{1}{60}$, has stopped.

Here we have myalgia, of which one of the most important predisposing causes was the depressing influences of sickness. The four cases that follow are myalgia from overwork.

Case IV.—J. K., aged 28, a laborer, applied October 20, 1874. Has had pain and stiffness in the small of his back for two years. This came upon him gradually, and did not prevent his working until a few months ago, although he has for eighteen months had great trouble in lifting heavy loads. At present he cannot bend his back; in essaying to do so, moves his body from the hips at an angle, the back remaining stiff and rigid. When he stoops, he cannot rise without the aid of his hands upon his knees. Gait slow and hesitating, because the slightest jar is painful; and he says that if he stubs his toe he feels as though his back would break. Pain is always present, and increased by all movement.

A careful examination excludes spinal and renal disorders. The erector spinæ mass of muscles on both sides is very rigid, standing out in firm, unyielding columns, which impart to the finger a very different sensation from that of healthy muscles. The left side is a trifle less hard than the right, and on strong effort at bending perhaps relaxes a little.

The man has never had articular rheumatism; has no heart-trouble. He is pale, and has lately lost flesh. He has endured a great variety of treatment, including blistering and hypodermic injections of morphia, but has experienced no relief. Ordered hypodermics of atropia, gr. $\frac{1}{60}$, daily.

October 27.—Has had five injections, some into the subcutaneous tissues, some directly and deeply into the body of the erector spinæ muscles. The effect in relieving pain is the same in each case. He has now but little pain; can stoop and rise, lifting a weight; even bends his back a little. The gain in point of suffering is immense.

Up to November 1, he had in all thirteen injections of the drug, each gr. $\frac{1}{60}$, and ceased attending, reporting himself able to go to work. The muscles were still rigid, especially on the right side, but decidedly less so than when first seen.

Case V.—J. O'H., aged 45, a laborer, came under observation May 10, 1874. He suffers from "lumbago," has great stiffness in back, attended with pain which extends into left hip and across the fore-part of his left leg. It came on suddenly four weeks before, after un-

usually severe muscular exercise, which was, however, only some fifteen or twenty minutes in duration. Being out of work, he chanced to meet a comrade in the street who was employed as a "rammer" in repairing cobble pavements. With a view to seeking work of that kind, he took his friend's place for a while, "to get his hand in." When he stopped he had great pain and soreness, and could scarcely reach home. For several days movements were very painful, and he was compelled to keep his bed. He slowly improved, and got out again, but has been quite unable to work. Has more or less pain in lumbar region, increased by walking, etc. He cannot stoop without great pain, and, if he does so, is unable to rise without assistance. Erector spinæ affected. The left side harder, fuller, more painful than the right. General health good. Has never had articular rheumatism; occasionally has had muscular pains in shoulders, but never severe enough to oblige him to leave off work.

Treatment: atropia, gr. $\frac{1}{60}$, into left erector spinæ mass.

May 11.—Atropia, gr. $\frac{1}{60}$, into left side.

May 12.—Atropia, gr. $\frac{1}{60}$, into right side. Has less pain; can stoop with relative ease.

May 13.—Feels a great deal better. Pain lingers in hip. Can stoop, walk, run, with ease. Except slight dilatation of pupils, has had no signs of general physiological influences of atropia.

May 15.—Had some return of pain yesterday, after improper exertion. Is better to-day; in fact, has no pain. Some rigidity of the muscular pillars of the back persists. Feels able to go to work.

I injected the atropia five times in all, and have not seen him since. There is the best reason to believe that he would have returned if there had been any further trouble.

Case VI.—C. K., aged 68, a retired seaman, applied June 5, 1874. He has never had rheumatism; is not subject to muscular pains; to use his own expression, "has not had a pain of any kind for thirty years," until ten days ago, when, after an unaccustomed strong muscular effort in helping to lift a barrel of rice, he was at once seized with pain in the small of his back. This was not severe when he was quiet, but very bad whenever he attempted to move, so that for more than a week he was scarcely able to turn in bed. The pain extended from the lumbar region into both thighs. Has a good deal of stiffness now, and cannot stoop to tie his shoes; has to have assistance in rising from his chair. Muscles of the back somewhat hard, with a degree of tenderness on pressure. Has had no fever; tongue clean, appetite excellent. Plasters and various liniments have been, he states, of no service.

Injected atropia, gr. $\frac{1}{60}$. Immediate relief.

July 9.—Reported that the morning after his visit he was able for the first time in ten days to tie his shoes. Injection repeated, and so on at intervals of two or three days, until four were given. Some weeks later he called to say that he had had no further trouble and to express his gratitude.

Case VII.—M. N., aged 45, laborer in a rolling-mill, was first seen October 13, 1874. He has very heavy lifting to do, and has had for four years a severe pain and stiffness in his right arm near the shoulder. This trouble is not constant. When he is at work, warm and sweating, he feels "all right," and can use his arm freely; but as soon as he stops and begins to cool off, the pain and stiffness return, and continue until work or exercise again warms him up. The pain is very severe, and movements of the arm evidently give rise to exquisite anguish; it is worse at night, so that sleep is often impossible. On examination, the arm and shoulder are found to be normal in size and outline, but the right deltoid muscle is a trifle firmer in texture

throughout than its fellow of the opposite side, and is tender to the touch. But at the region of its insertion it is exceedingly hard and rigid, feeling like bone.

Has not had rheumatism. General health good. Expression anxious and careworn. Given belladonna, with a liniment.

Oct. 20.—Returned, not relieved by the treatment. Injected atropia, gr. $\frac{1}{60}$, into subcutaneous tissues near insertion of the deltoid muscle. This was followed by tremor of the arm and quivering of muscles. It was done at Professor Da Costa's clinic, in the presence of the class, and the patient was directed to sit outside a few moments. In ten minutes he returned to the lecture-room, swinging his arm around his head, quite free from pain, and happy, saying, "Oh, if it would only last!" The muscle was quite supple and natural in texture at this time, except at its insertion, where there was a slight denseness, trivial in comparison to the previous condition, which almost resembled to the touch an exostosis. Poor fellow! the relief lasted only a few hours. Once afterwards I injected atropia, with a like result, but he became discouraged, and has not returned.

In reviewing these notes, it will be observed that in Case I. there is a clear history, and in Case II. a doubtful history, of articular rheumatism, in Case III. a history of acute tonsillitis, and that the remaining four are cases of pure myalgia. All were males.

The solution employed was of the strength of gr. i ad $\frac{1}{3}$ v, of which $\mathcal{M}v = \text{gr. } \frac{1}{60}$.

Slight dilatation of the pupils was invariably observed in a few minutes after the injection; very frequently dryness of the fauces, with thirst; occasionally a feeling of confusion and dizziness, which, however, was of short duration. Sometimes diarrhoea was noticed after repeated hypodermics, and the old stone-mason (Case II.) was relieved of his usual necessity of rising at night to void urine, while under treatment. The belladonna eruption was not observed in any of these cases.

With a smaller dose than one-sixtieth of a grain, say one-eightieth or one-hundredth, I have failed to obtain the prompt relief afforded by that dose, and I have found doses larger than one-sixtieth unnecessary.

In Case II. small inflammatory nodules occurred in the integuments at two of the points of injection, but disappeared in a few days without suppurating. Other than this I have seen no local inflammatory action follow hypodermics of solution of atropia.

In these cases relief was not only decided, it was also prompt, and in six of the cases effectual. In Case VII. it is no more than fair to presume that a continuation of the treatment in conjunction with rest would have resulted favorably.

It would be foreign to the purpose of this paper to enter upon the discussion of the essential pathological condition underlying these cases. At some future time I hope to publish a brief summary of the opinions that have obtained in reference to this form of painful disease of the voluntary muscles. At present my object has been to so group a number of cases as to illustrate with definiteness the nature of the trouble under consideration, and to show the effects of a special treatment.

Whether the cause of the common symptoms be rheumatism of the muscles, or hyperæmia, or inflam-

mation with slight serous effusion, or partial paralysis of vaso-motor nerves, with escape of serum into the intimate tissues of the muscles, or a neuralgia of the minute nerve-twigs supplying the muscles, it is certain that the terminal nerves are thrown into a state of irritation which expresses itself in pain and in spasm.

Spasmodic contraction occurs at first, as a rule, only when the muscles are brought into use; later, a condition of tonic spasm, a spastic rigidity, comes on; and, finally, such tissue-changes take place as to lead to great impairment or absolute loss of function with or without atrophy.

In the earliest stages, that is, in the acute form, I have not found atropia beneficial. Hypodermics of morphia, on the other hand, have been serviceable in allaying the pain and inducing repose, but this quite independently of any local action. But later, when the disease has become chronic, or in some cases when it is from the outset of the chronic form and the element of spasm is present with more or less rigidity, atropia used locally is, as the cases show, of prompt and certain benefit. There seems the strongest reason to believe, both from clinical observation and from the researches of experimental physiologists, that the benefit arises from the direct sedative effect of the drug upon the nerve-filaments, and that it thus, by relieving the irritation, relaxing the tonic contractions, and putting an end to pain, enables the circulation and nerve-supply to resume their normal course and relations.

But after a long time, when permanent changes have taken place in the tissues, it is useless to hope that any treatment will restore to the muscles their suppleness and contractility. But even then much may be done by this means in relieving pain, and enabling the patient to avail himself of supplementary and auxiliary muscles in performing customary movements (vide Case IV.). Contrary to the experience of Wood, who states that the drug must be thrown "directly into the muscle" (vide Wood's Therapeutics, p. 222), I have found that the effect is the same whether it be injected directly into the muscle or into the subcutaneous tissue overlying it; and I recall clinical lectures of Dr. Da Costa's, in which he stated that the injection might be made, and that he had repeatedly tested this point, into distant parts of the body, with a result scarcely less decided than when in the immediate vicinity of the rigid and painful muscles.

Let me add that in looking over the literature of this kind of muscular rigidities I have been struck with these points: first, the absence of anything like a direct recognition of the fact that the rigidity is at first spastic; and second, the uncertainty, not to say inutility, of the long list of remedies adduced for the relief of this trouble, which, trivial as it certainly is in point of prognosis as regards life, is to the working-man most serious, since it is extremely common, very painful, and too frequently absolutely unfits the sufferer for long periods of time from earning his livelihood. A recognition of the fact, then, that the rigidity is, in its earliest stages, a form of tonic spasmodic contraction, coupled with our knowledge of the action of atropia upon muscular

spasm, has led to a systematic and thorough trial of this treatment, the notes of which are given to the profession.

SUDDEN DEATH FROM RUPTURE OF A UTERINE CYST (EXTRA-UTERINE PREGNANCY?).

BY A. K. MINICH, M.D.

MRS. K., aged 35, mother of eight children, the youngest a suckling, retired, feeling well. At 11 o'clock, same night, she was seized with violent pain in the lower portion of the abdomen. I saw her for the first time the next morning at 8 o'clock, and found her in a state of collapse. The mind was clear, and her chief complaint was of great pain in the hypogastrium. Her surface was cold, and covered with a clammy sweat; the pulse feeble, ranging from 144 to 160 per minute. The uterus was normal in position. She was ordered quinine and brandy, but died at 3 P.M., sixteen hours after the attack.

The autopsy was made thirty-six hours after death. There were no signs of inflammatory change in the abdomen. A basinful of blood-clots was scooped from the lower portion of the abdomen, with about two-thirds of a bucketful of dark-colored blood. Upon the right side of the fundus of the uterus, corresponding to the junction of the Fallopian tube, was a lacerated opening, which looked into the abdomen. This opening was about the size of a pea, and communicated with an empty sac, which, when distended, would probably have been as large as a hulled walnut. The sac did not communicate with the Fallopian tube or the cavity of the uterus. Its walls were very thin, and free of clots or deposits. The blood-vessel through which her life ebbed so slowly yet surely away was very small, being scarcely perceptible. She had menstruated one week beforehand.

NOTES OF A CASE OF TÆNIA.

BY P. F. HARVEY, M.D.

THE following case is related as being of interest from the large amount of carbohc acid administered without apparent benefit.

Dr. C., a physician of middle age, consulted me April 22 of this year, on account of a tape-worm that had troubled him for a considerable period, the removal of which he had attempted but a short time previous. From several cases that I had seen reported as successfully treated with carbohc acid, I suggested this remedy as likely to destroy the parasite in his case. Concurring in my opinion, he began on the following morning by taking simultaneously one ounce of castor-oil and two pills of pure carbohc acid, each containing one grain. This dose was followed by two of the pills every two hours until sixteen had been taken. During that day there was no restriction of diet.

April 24, morning.—A powder of rhubarb and jalap, of each ten grains, was taken. One ounce of castor-oil was given at 5 o'clock P.M. At bedtime patient took two carbohc-acid pills, with three comp. cath. pills. Diet restricted to a cup of coffee for breakfast.

April 25, morning.—One ounce of sulphate of magnesium was administered, together with two carbohc-acid pills. Waited till 3 o'clock P.M.; from that time

until 9 o'clock P.M. patient took four carbohc-acid pills every two hours, making eighteen pills taken during the day. Fasted until noon, eating very sparingly then, and taking a plate of soup at 3 o'clock P.M.

April 26.—At 7 o'clock A.M. took one ounce of castor-oil, with forty-five drops of turpentine, accompanying the dose with three carbohc-acid pills. At 10.30 A.M. took one-half ounce of koosso. Fasted the entire day. At 1 o'clock P.M. passed four or five feet of tænia; at the same time he took two croton-oil pills, each containing one-half drop of the oil, and an injection of one ounce of magnes. sulph., in eight ounces of water, was administered. At 3 o'clock P.M. took one ounce of castor-oil. At 4.30 o'clock P.M. passed a *tænia medio-canellata* entire, twenty-five feet in length, and at the same time a small one, eight inches long.

Remarks.—The treatment was commenced by giving sixteen grains of pure carbohc acid, in divided doses, on the first day; ten grains were given on the second day, eighteen grains on the third day, and three grains on the fourth day; using aperients and cathartics freely, and keeping the primæ viæ free by abstinence from food. Thus within three days forty-seven grains of the pure phenic acid were given without accomplishing the dislodgment of the worm, although amply assisted by free catharsis. Both Dr. C. and myself were of the opinion that the effect of the acid upon the parasite was nearly if not quite nugatory. The koosso, aided by evacuants, acted promptly and thoroughly. In two and a half hours after its exhibition the worm began to pass, and by keeping up the evacuant action the two entozoa were passed entire within six hours after the anthelmintic had been given.

FORT PREBLE, MAINE.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

CLINIC OF DR. H. C. WOOD.

Reported by Dr. JOHN GUITÉRAS.

A CASE OF MILK-LEG IN THE MAN.

H. S., æt. 28, German; admitted September 16, 1874; a clerk by occupation; was engaged as a corporal in the Franco-Prussian war. Last spring he was constantly exposed to wet and cold, working as a trackman on a railroad between York and Columbia. During May he was attacked with a very obstinate diarrhœa, due to the exposure, or perhaps to the limestone water that he was forced to use. He was very much debilitated by the profuse diarrhœa, so that he was unable to work for ten weeks before the development of the present trouble. The first symptom was pain in the right knee, which was in a day or two followed by some swelling, and shortly afterwards blue and red spots began to appear over the leg. The swelling continued; the leg became very hard, and the discoloration extended until the limb became black and blue all over. There never has been much pain connected with the disease, and on the 17th, when Dr. Wood first saw him, the greater extent of the discoloration had been replaced by a marked paleness.

The leg is at present (Sept. 19) swollen, and of about the normal temperature. It might appear to be œdematous, but it is very hard, and does not pit upon pressure. This hardness is but little marked in the foot; is

much more so in the calf, becoming very decided in the lower two-thirds of the thigh. The discoloration occupies at present the inner and outer surfaces of the thigh. Four or five weeks after the appearance of the first symptoms, the opposite leg began to be affected. It is now swollen, quite pale, and the seat of patches of discoloration and of some hardness; though not to the extent of the other. He states that both the extremities retain their usual sensitiveness.

After detailing the history of the case and pointing out the present symptoms, Dr. Wood remarked substantially as follows: This man, then, after much exposure, and malnutrition, is attacked with a diarrhoea, due, it may be, to the use of hard water, and which, though not dysenteric, as shown by the absence of pain and bloody stools, is very exhausting, the stools being large and frequent. After eight or ten weeks he finds his legs affected with pain, swelling, and discoloration. About the constitutional affection and early symptoms we know nothing. He probably must have had some fever.

Now, what is the matter with this man? In the obstetric wards you have seen legs resembling this. A few days after labor, a similar condition may come on, generally affecting first the left leg, and accompanied with marked symptoms of constitutional disturbance. The pain and swelling are soon followed by excessive hardness, the limb feels like a board, and the peculiar shining whiteness of the skin has given to the affection the name of milk-leg.

Dissection has shown that the constant lesion in these cases is a thrombus, or coagulum of blood, in the veins of the affected limb. It is commonly taught that this coagulum is due to phlebitis, and very generally there is inflammation of the veins, as has been shown by post-mortem examinations; but in many cases there is simply a coagulum of blood, and no evidences of inflammation can be detected in the coats of the vessel. Along with the stoppage of the veins there is an occlusion of the lymphatics of the leg, and in some cases there are marked evidences of angioleucitis; but these are coincident phenomena, not essential to the disease. In the lying-in woman these lesions seem to be due to the passage through the veins of matters perhaps putrescent, or fragments of broken-down clots from the uterine veins. The disease affects much more frequently the left leg in women, and two explanations of this clinical fact have been advanced. In the first place, the right primitive iliac, in its course from the left side of the vertebral column to the right of the pelvis, crosses almost at right angles over the left primitive iliac vein, which is running from the right side of the column to the opposite side of the pelvis. So decided is the pressure of the right iliac artery on the left vein, that in cases where the clot extends into the iliacs there is a marked groove in the vein at this spot. Other obstetricians assert that the vessels of the left side are much more often subjected to pressure by the frequency of the left occipital positions.

The case before us is exceptional, in that the subject is a man, and in that the right leg was first affected. But it has followed the general rule that rarely one leg alone is affected, and seldom both are attacked at the same time. As in the present case, the second leg is rarely so severely implicated as the first.

As already stated, milk-leg is common in the puerperal woman, but it is rare in the male, and occurs almost exclusively in those who are broken down by excesses or are the subjects of diathetic disease. It is not very rare in advanced phthisis, where we see either milk-leg or milk-arm. Another common cause of milk-leg is cancer; why, is not positively known.

In cases of abdominal cancer, it may be thought that there is a direct propagation of the local affection or of

the inflammation excited by the cancer to the vein; but milk-leg occurs in cases of thoracic as well as abdominal cancer, so that it must be due to diathetic, not local causes.

Dr. Trousseau especially dwells upon this connection between cancer and milk-leg, and even gives to this affection of the limb a diagnostic importance: thus, he narrates a case of supposed simple ulcer of the stomach, which he asserted to be cancerous upon the supervention of milk-leg, and in which an autopsy confirmed his diagnosis. In another case of general weakness and dyspepsia, Trousseau found the same complication sufficient ground for the diagnosis of carcinoma, though no evidence of a local lesion could be detected, and he was unable to decide where the carcinoma was located. After death, a cancer of the pylorus was found, which did not mechanically interfere with the functions of this opening. In our case the liver and spleen are not enlarged, the lungs and heart and all the other organs seem healthy. In the absence of any indication of local disease, and in the fact that the patient has been always a hearty and hale man, and is under thirty years of age, are to be found sufficient reasons for discarding any fears of the existence of a malignant tumor. Looking for another cause, Dr. Wood stated that he had seen at least one case evidently due to the rheumatic diathesis. Just as there is a rheumatic endocarditis, there may be a rheumatic phlebitis. If you remember the pathology of the blood, you will know that in most of the cachexiæ there is a condition of hyperinosis or excess of fibrin. It exists in cancer, in the wasted consumptive, and in the rheumatic; and it is accompanied with a tendency to a spontaneous coagulation of the blood. As has already been stated in cancer, milk-leg is not due to a propagation of the local disease, for it occurs independently of the location of the tumor. Apparently, there are two reasons to explain the action of the cachexia of cancer and of consumption: 1, the tendency to coagulation, due to the excess of fibrin; and 2, that want of nerve-power that predisposes to inflammation on very slight causes. In rheumatism you have the system irritated by a poison which, so often lighting upon the heart, may at times light upon the veins, and you have, moreover, marked hyperinosis. Diseases have their rights as well as persons, and in the complete absence of indications of a rheumatic diathesis we cannot force the present case under that class. Finally, being unable to trace it to a traumatic origin, we are obliged to believe that the continued diarrhoea has produced a condition of cachexia in our patient, which is the sole cause of the inflammation. The involvement of the second leg seems to be due to the washing of a clot into its veins, or more generally to a propagation of the disease from the veins of the sound leg. It is evident that any loose venous clot must, however, tend rather to be carried towards the centre than the periphery. The setting loose of a solid mass in the circulation may occur, in many conditions, such as heart-disease, and even sometimes in varicose veins. When a vein is occupied by a coagulum, the occluding clot always protrudes into the larger vein, and very generally offers a conical and more or less ragged end, due to the constant washing of the blood passing along the patulous vessel. A small piece may be carried into the circulation, to the right side of the heart, and thence into the pulmonary arteries, where it is at last arrested, cutting off the supply of blood from some section of the lung. If this is extensive, the patient is seized with a sudden sense of agony and mortal fear, with a terrible feeling of suffocation, which distinguishes embolism of the right from embolism of the left heart, where we have syncope instead of suffocation. If the branch occluded be large, the patient may perish in a few moments. If the patient

survive, following the infarctus, you have the symptoms of pneumonia, or of collapse of the lung,—such as dullness, cough, and bloody expectoration: there is, however, no true crepitant râle, but a coarser one. The peculiar bloody sputa may become in a day or two very fetid, and then we have a condition of gangrene.

In the stage to which the present case has arrived, there is hardly any danger of such accident occurring. The clots are pretty well consolidated, and probably the ends are dissolved and washed away. In examining this limb with a view to a prognosis of the case, we must remember the anatomy of these veins. Three sets of vessels return the blood from the lower extremities, viz., the venæ comites, the external saphenous emptying into the popliteal, and the internal or long saphenous, all the veins eventually emptying into the femoral vein. So that by occluding the latter you prevent almost all the return, except what may occur by anastomosis with the superficial, abdominal, and the obturator veins. Of course your prognosis depends on the chances for the blood to return: these are sometimes so small that gangrene very soon sets in. In this case there is in the right leg an intense hardness over the track of the internal saphenous vein, which affects the tissues so generally that the vessel cannot be felt as a cord, as it must have been at first. The popliteal space is also very hard, showing that this vessel must be pretty well occluded. The femoral vein feels like a hard cord, somewhat sensitive to pressure. On this same right side the impulse of the artery is less than normal, showing that the blood-supply has accommodated itself to the existing circumstances. In the left leg the trouble is mostly below the knee, the femoral vein being pretty well opened. The further history of these clots varies a good deal. The worst transformation is that they become harder and harder, uniting with the vein into a fibrous cord; the next and most general consists in an organization and contraction of the clot, and the formation of an irregular space between it and the wall; this leaves the vein partially obliterated and divided up into a series of chambers, through which the blood passes. In other cases the clot breaks up and is dissolved by the blood, owing, doubtless, to its alkalinity. In the present case there is no danger of immediate death, and it is very probable that the left leg will recover completely, and the right partially. The softening and diminution of swelling show that the blood is returning, but it will be some time before he will regain motion and the natural softness of the parts.

Treatment.—During the first stage one might be inclined to treat it as an inflammation, by antiphlogistic methods; but there is generally connected with the trouble some cachectic condition. If there is rheumatism, this should be treated. In most cases the leg is to be covered with lead-water and laudanum, and quinine to be given to sustain the system; but the period for any such treatment in our case has passed away. The leg of the patient is wrapped in cotton-wool, surrounded by oiled silk, not because it is cold, as in arterial embolism, but to produce a sort of constant vapor-bath, and bring about a condition of perspiration which may remove the serum exuded into the cellular tissue of the part. It may probably be of benefit to paint the track of the vessels with iodine, hoping to aid in the absorption of the clots. This will be done in the present case, as it is at least harmless. The man will be given abundant and nutritious diet, and we must also support his system by the administration of iron and quinine.

October 7, 1874.—Improvement commenced directly after the lecture, and has steadily continued. The patient has been kept upon the use of Basham's mixture and quinine, and has been steadily improving. To-day he is able to walk about, and, though pale and anæmic, feels much stronger. His appetite is good, bowels reg-

ular, and tongue clean. The discoloration has disappeared above the knee, and there is but a slight bluish tint below. There is some induration yet about the calf and lower part of the thigh, but this, he says, almost disappears when lying down. The left leg is almost normal. There is some pain yet in the right popliteal space, and some tenderness over the femoral vein of the same side; this has a cord-like feel, and the lymphatic glands over it are infarcted.

October 16.—Improvement has continued, and there is nothing but very slight pain and a popliteal stiffness left in the right leg. The left leg has completely recovered.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF JOHN NEILL, M.D.,

Associate Clinical Professor of Surgery.

CURE OF INVERTED TOE-NAIL WITHOUT EVULSION

THE first case I present for your inspection and study this morning is one of "inverted" or "ingrowing" toe-nail. This is the term which is probably familiar to you all, and, although it does not truly express the nature of the affection, it is that which is in ordinary use. The affection is so common that in an audience like this there are doubtless present one or more sufferers from this malady.

The pain and suffering are often so great as to prevent the patient's walking without limping; and sometimes the toe is lost from the disease, especially when it is not properly treated.

In looking at this toe you will see that it is red and swollen at its extremity, and more especially upon its inner edge. The greatest amount of soreness is usually found at the outer edge of the toe.

Very often the edge of the toe which presses upon the side of the nail is more elevated than it is in this instance, and is covered by fungous granulations which are very sensitive, and the cleft containing the nail is filled with an offensive purulent discharge.

This affection belongs to civilized life. Savages and plantation-negroes do not suffer from it, because they do not wear tight shoes, which are really the exciting cause. The effect of tight shoes, however, is not to make the nail grow into the flesh, but to push or press the flesh over the nail. The direction of the growing nail is not so much altered as is supposed, and, instead of the nail growing into the flesh, the flesh grows over the nail. Unfortunately, the usual treatment of cutting off the corner of the nail, or slicing off the edge which is apparently at fault, only aggravates the complaint by allowing the flesh to be still farther pressed into such a position that the nail when it grows must again "grow into" it.

Not only does cutting the corners and edges of the nail do harm, but many of the remedies applied are equally injurious. Scraping the nails, cutting out V-shaped pieces from their free edges, and complete evulsion, though recommended by many surgeons, I believe to be entirely useless and attended with unnecessary pain. There is a philosophic mode of treatment which is always successful, if properly carried out; and, as we have shown that the flesh grows over the nail, the flesh is to be pushed away from the nail. In the case which is before you this treatment can be readily employed; but even in cases in which the nails are buried in pus and sensitive granulations, the result is equally certain. The time that is required for the cure depends not so much on the duration of the disease, but on the damage which has been done by cutting the nail; and the deeper and more thoroughly the offending edge of the nail has been removed, the longer will be the process of repair required.

If the nail has not been cut, it can be cured in a few weeks. If it has been cut away, it will require just long enough for the nail to grow again, which may be four months.

In commencing the treatment, first clean and dry the parts from all offensive secretions and pus. This can be done with a camel's-hair pencil, or a piece of sponge, but still better by using a small swab made by rolling a small amount of carded cotton about the end of a probe. The ordinary silver probe will not answer, because the point or bulb at its end, as you see, prevents the cotton being slipped off when it is soiled. I have, therefore, probes made out of No. 16 knitting-needles, which answer the purpose admirably. This same apparatus will also be found useful in wiping out the external meatus of the ear. The little brush of cotton can be readily made on the end of this instrument, and can be as rapidly removed after it has been used; and with it you can gently wipe the most sensitive granulations, and obtain a thorough examination of the parts. If the granulations are very luxuriant, it is best to direct our treatment exclusively to them for a few days, and they can be rapidly reduced by brushing them over with the nitrate of silver either in solid form or in solution, if this latter is the more convenient mode of application. Besides the nitrate of silver, a solution of the chloride of zinc or Monsel's solution can be used with great benefit in reducing the granulations and diminishing the discharge. After the granulations have become less sensitive, but before they have entirely disappeared, you commence the real treatment. After drying the surface with the cotton brush, it is to be covered with a layer of collodion. Then, by means of the other end of this probe, which has been flattened out and rounded into a packing instrument, a dossil of cotton is to be carefully pressed between the flesh and the nail and cemented into its place by another layer of collodion. A dossil of cotton may also be tucked under the anterior free edge of the nail and secured in the same manner if this edge has not been already cut away. This dressing will usually retain its position without much trouble; but to make it more secure a narrow strip of adhesive plaster may be applied around the toe. In two days the toe should be again dressed, but the cotton should not be removed unless it is moist and saturated with pus. After a few dressings the discharge will cease and the cotton will remain dry, and then it should not be taken out, but a fresh dossil should be thrust in alongside of that which is already beneath the nail, and coated with collodion. You will soon be able to press a wedge of cotton beneath the front edge of the nail, and bring it out beneath the side which has been pressed against so long by the fleshy granulations. After this has been accomplished, the cure is very rapid. The ordinary shoe can be worn, and the dressing need only be renewed twice a week. The patient must now be instructed in this process of packing and wedging the cotton under the edge of the nail and fastening it in its place by means of collodion, and he never need have an inverted toe-nail again, and will be thankful that you did not subject him to the painful operation of evulsion.

TRANSLATIONS.

"SYPHILIS" OF THE HARE (Bollinger, *Virchow's Archiv*, Bd. 59, Heft 3 and 4).—Up to this time no accurate observations have been made of the pathological anatomy of the disease which is seen among hares, and which is called by hunters "syphilis." Bollinger has recently had the opportunity of making post-mortem

examinations on the bodies of three of these animals that suffered from this affection. He finds that the pathological changes which result from this process consist of characteristic new growths of heteroplastic nature, which take the form of tubercles of larger or smaller size, which are principally found on the genitals, especially in the testicles and prepuce and in the uterus and ovaries, but also in the connective tissue beneath the common integument at any point. These tubercles, when seated in the testicle, have a tendency to involve the coverings of that gland, and may cause ulceration, leading to perforation.

The same tubercles are also met with in the muscles, lungs, liver, spleen, kidneys, and in the lymphatic glands of some portions of the body. When seated beneath the skin, they can also lead to penetrating ulcers which may become quite extensive. Under the microscope, these deposits at some places, by the growth of small cells which they contain, present a resemblance to tubercle as seen in man; at others they have a certain correspondence with cancer; while still another series of these tubercles have a marked similarity to syphilomata.

The tubercles which present this last resemblance are characterized by a diffuse, not sharply-defined, proliferation of round cells, which by means of outgrowths from these gradually involve the sound tissues. Another characteristic which they possess is their tendency to disintegration, so that the tubercles become partly softened and cheesy. Bollinger thinks that this disease is a constitutional one, which is transmitted by sexual intercourse, which is in many respects analogous to tubercle or syphilis in man, and is not inaptly characterized by the name syphilis which has been given it.

W. A.

OBSERVATIONS ON THE ACTION OF ERGOT (Dr. A. Wernich, *Berlin. Klin. Wochenschrift*, No. 27, 1874).—Dr. Wernich has developed a new theory of the action of ergot. This drug, according to him, does not exercise a contractile influence on the muscular coats of the arteries, or, indeed, upon organic muscular fibre in general, as has hitherto been commonly taught, but has, on the contrary, a depressing effect upon the tone of the vessels, and more especially upon that of the veins, so that the blood accumulates in them while the arterial system becomes relatively empty, and a secondary stage of contraction follows. In support of this view, he adduces the microscopic conditions which have been found in animals upon which he has himself experimented, and also the results of similar investigations which have been conducted by others. There has always been found a congestion of the venous system, while the arteries have been empty. The heart of the frog has been observed to beat more strongly while a diminished and insufficient amount of blood passes through it; and if poisonous doses of the drug are administered to the animal, this organ is found in a condition of diastole.

He thinks, further, that a critical examination as to the blood-pressure when injections of ergotin have been made will support the view that there is primarily a depression of the pressure in the arteries, followed by a gradual increase of tension. Finally, if the supposition that the first effect of the exhibition of ergot is to produce contraction of the arteries be correct, he considers it impossible to explain the curative effects of this treatment upon aneurism on physical grounds. In accordance with his theory, and supported by the well-known observations of Oser and Schlesinger, he explains the uterine contraction which results from the use of ergot by an anæmic irritation of the nervous centres whence the impulse to contractions of the uterus come.

W. A.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

WHOSE FAULT IS IT?

ACCORDING to General Eaton, of the National Board of Education, during last year eight millions of dollars were donated in the United States by private citizens to educational endowments. We would like to know how much of this money went to the endowing of medical schools. Our opportunities for hearing of such donations are very good, but, so far as our knowledge extends, scarcely one dollar of the amount was given to medical schools, except what was bequeathed by Mr. Hopkins, of Baltimore. Where in this country is the medical school that has any endowment funds? Where are the salaried chairs that shall enable their occupants to accomplish some original work? Where are the medical scholarships to aid the struggles of those young men who are rich in intellect but poor in money? Colleges and universities spring up like magic; institutes of science up and down the land open wide their doors for gratuitous or partially gratuitous instruction; great sums of money, millions upon millions, are commanded for every kind of education except medical. Is any science more important than that which treats of health and life? Are education and training more necessary to the man who deals with physical problems than to him who struggles against disease and the arch-champion, death? Left to their own devices, the medical colleges savagely avenge themselves upon the people of this land by pouring forth

annually a mass of raw material, whose powers and activity for destruction the All-wise can alone measure.

To our thinking, the people are, however, to be more pitied than blamed in this matter. The profession seems slow to learn that its own salvation as well as the good of the laity demands medical endowments. More than this, many of the profession, while recognizing the needs of the hour, fail to come up to their plain duty in the matter. "Ask for money! I would not do it for the world; my patients would not stand it," or words to that effect, we have heard over and over again. Men of the widest reputation are so timid that they dare not talk face to face with the person whose life, it may be, they have saved,—dare not talk honestly and plainly as a man ought to talk to a man when the gravest interests are at stake,—men of the widest experience becoming as bashful as a hysterical girl, at the mere thought of "begging." Is this right? Does a physician lay aside his manhood when he practises his profession? In business life, the closer the relation the more freely do men speak to one another about such matters; and why is a doctor any better or any worse than a business man? Is it the man whose life is saved that does a favor to the physician by employing him, or is it the physician that confers a favor upon the patient by his skill? We have no sympathy with that unmanly state of mind which hinders its possessor from talking fairly and squarely to any man about his duty to give, and about the needs of the hour. Wisdom and tact are of course required to know when and how to approach, but there is a time and a manner for every one, and, properly done, the effort will heighten the physician in his own esteem and in that of his friends, and will bring a steady increase of influence. How many doctors are there in this city or in this country who are a living force among the people? How many are there whose influence is wasted, even to death, by want of use! If every doctor in the land were habitually looking for opportunity to speak a word in season, medical colleges would soon be among the richest. A half-dozen physicians, all with one or two exceptions very young men, in this city have within the last two years shown what might be done, by raising nearly eight hundred thousand dollars in money and land for the University Hospital. The success of this effort demonstrates that the profession needs only that its members should feel their public responsibilities, and should play their parts like men, in order to have those endowed colleges and laboratories which can alone enable it to be as a body what it ought to be.

WILL IT PAY TO DO WHAT IS RIGHT?—An enthusiastic public meeting was recently held in Boston for the purpose of raising money to build a suitable building for the Medical Department of Harvard: seventy-five thousand dollars were subscribed in the room. It was stated that the success of the new method of teaching is absolutely assured. This year about *one hundred new* students have entered for the medical course. As the fees are two hundred dollars a year for three years, an annual income of one hundred students means an annual income of from fifty thousand to sixty thousand dollars.

We believe Harvard has the only rapidly-growing class on the continent, and it apparently soon will have, if it has not even now, the *best paying* medical class in the United States.

It is stated that when the contemplated building is finished, the Society for Medical Improvement will deposit in it their valuable collections, to be used in teaching. The *Boston Medical and Surgical Journal* asserts that the Harvard School will soon be the great medical educational centre of America. If all the other schools continue to hug the delusion that in this country there is no demand for, or appreciation of, other than half-educated doctors, we fear "Ichabod" will be truly written over their door-posts, and Harvard really reign supreme in spite of the natural disadvantage of being in a comparatively small and isolated city.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—Some one has favored us with a copy of the *Easton Free Press*, containing an account of the annual meeting of the Northampton County Medical Society. It is stated that a lively discussion occurred following the very excellent address of Dr. Traill Green, on the duty of the physician when patients call in a second physician before discharging or notifying the one in attendance, and without informing the second of the attendance of the first. We should think there was hardly room for discussion upon such a point. The procedure seems to us an insult to the doctor chosen as well as to the one discarded. One thing is very certain: if the physicians of Northampton County follow to the full the courses inculcated by Dr. Green, they will be like brethren dwelling together in unity.

THE WOMEN.—A school of medicine for women is about to be put in operation in London, in consequence of the earnest efforts of such men as the late Dr. Anstie, Dr. T. K. Chambers, and Mr. Ernest Hart. Among the Professors already appointed are Dr. T. K. Chambers, Practice of Medicine; Mr. Berkeley Hill, Surgery; Mrs. Garrett Anderson,

Midwifery; and Mr. Crichtett, Ophthalmic Surgery. On the list of the Council we notice the names of Burdon Sanderson, Hughlings Jackson, Prof. Huxley, and Dr. W. S. Playfair. The last public act of Dr. Anstie was, as dean of the faculty, to apply to the medical examining bodies of London for recognition of the school as a duly constituted teaching body. Until this is done, the students of the school will not be admitted as candidates for degrees. The answer of the examining bodies had not been made public at the date of our latest advices. In this city the corner-stone of a new building for the Women's Medical College was laid October 1. The County Medical Society of Hartford, Connecticut, has elected a Mrs. Dr. — or a Dr. Mrs. (which should have precedence? the sign of wifehood and presumably of maternity, or that of the chosen calling?)—Ellen E. Hammond.

POISONOUS MUSHROOMS.—A recent grand jury in London rejected a bill of indictment against a gardener for causing the death of a fellow-servant by administering poisonous mushrooms. The killing was really the result of a deplorable mistake. We give, from the charge of the judge, the following tabulation of Prof. Bentley as showing the general characters separating poisonous from edible mushrooms, premising that all fungi which grow under trees are suspicious and should be rejected:

"The edible mushrooms grow solitary, in dry, airy places, and are generally white or brownish; they have a compact, brittle flesh; do not change color when cut by the action of the air; juice watery, and odor agreeable; taste not bitter, acrid, salt, or astringent. The poisonous mushrooms, on the contrary, grow in clusters, in woods and dark, damp places, and are usually of a bright color; their flesh is tough, soft, and watery, and they acquire a brown, green, or blue tint when cut and exposed to the air; the juice is often milky, the odor commonly powerful and disagreeable, and the taste either acrid, astringent, acid, salt, or bitter. These characteristics are almost invariable."

LEADING ARTICLES.

THE PRESENT STATUS OF TRANSFUSION.

THE operation of transfusion, which has for many years been hanging on the outskirts of advancing medical science, with an occasional nod of recognition from an obstetrician, or a few words of encouragement from a passing physiologist, has of late been receiving a good deal more attention than formerly, and seems

at last in a fair way to have its merits examined into and its defects carefully criticised.

During the past year the various medical and scientific journals of this and other countries have frequently contained communications on the subject, new forms of apparatus have been devised, new methods of operating have been suggested, and the procedure has been attempted under various circumstances and in a variety of diseases.

The recent accumulation of facts in this direction has, indeed, been so considerable as perhaps to render not unprofitable the task of hastily reviewing the ground already traversed and considering briefly the prospects of the operation in the future. It is, of course, impossible in an article of this kind to do more than sketch in the most cursory manner the various appliances, methods, and observations which have been put forth: we shall, therefore, only indicate some of those which seem of the most importance.

And first, as regards apparatus, we may allude to the modification of Dieulafoy's aspirator suggested by Dr. Howe,* of New York, and the somewhat similar invention of Moncoq, of Paris.† The latter is described as consisting essentially of a glass cylinder in which moves a piston. From the lower part of the cylinder two tubes proceed, containing such an arrangement of valves that the blood enters by one and escapes by the other. The object of the piston is to reproduce by its alternate movements the cardiac diastole and systole. To use M. Moncoq's expression, "It is a real heart of crystal placed between the two subjects." The blood taken directly from the vein is immediately transferred to the corresponding vein of the patient, by means of a hollow needle placed within the latter, with which one of the tubes is connected.

The great merit claimed by M. Moncoq for his apparatus is the reproduction of the cardiac movements, and the absence of all danger from coagulation, the transfusion being truly immediate. In addition, M. Moncoq claims that the risk of phlebitis through introduction of air is avoided, and, the blood being introduced slowly and by regular undulations, the organism has time to become habituated to its new conditions. It will be observed that neither of the instruments alluded to differs materially from that of Dr. Aveling, described in the *New York Medical Record*, April 1, 1874, which consists of a hollow rubber ball in place of Moncoq's glass cylinder.

In connection with these forms of apparatus, the question of mediate or immediate transfusion is of interest. According to the method introduced, we believe, by Prof. Martin, and until recently most usual, the blood taken from the veins of the giver was received in a properly-warmed vessel, deprived of its fibrin by whipping and straining, and then injected in a defibrinated condition.

M. Moncoq, however, states—and he gives this as

one of the reasons which actuated him in devising an apparatus for immediate transfusion—that careful examination of the statistics of the operation had convinced him of the impropriety of the mediate method. He asserts that a very large proportion of the cases in which defibrinated blood had been employed, terminated fatally.

Dr. Howe's reasons for using his modification of Dieulafoy's apparatus are based on similar views of the dangers and inconveniences of the mediate method.

"The blood," he remarks, "being exposed for a length of time to atmospheric influences, is liable to receive deleterious ingredients. In the process of defibrination, a quantity of red globules, the chief nutritive and stimulating element of the blood, are necessarily entangled in the meshes of the fibrin and are removed with it. In cases where the hemorrhage has been great, the time spent in defibrinating may be of vital importance. The wounds in the veins being large, there is more or less danger of phlebitis or thrombosis."

The fact is that this question is as yet undecided, well-known names being arrayed on either side. Dr. Playfair remarked at a meeting of the Obstetrical Society that the physiological fact of the uselessness of the fibrinous element of the blood in transfusion is "generally admitted." He believed, too, that defibrination is the best method of preventing coagulation, and that the use of the mediate method permits the operation to be performed leisurely, and obviates all hurry and fuss.

Dr. B. W. Richardson urged defibrination of the blood on the same occasion; while Dr. Barnes, perhaps an equal authority, expressed decided opposition to the method.

In this country, also, opposition has been expressed to defibrination, Dr. A. Flint, Jr., having stated recently‡ that unmixed blood must be regarded as the only physiologically satisfactory fluid for transfusion, while Dr. James Chadwick§ regards the presence of fibrin as indifferent.

It is to be hoped that when the circumstances and methods of the operation are finally settled, some less complicated apparatus shall be devised than those heretofore in use. With the exception of Dr. Aveling's apparatus for direct transfusion, most of the instruments in use are not likely to prove available for the general, and especially for the country, practitioner, though they may be useful in hospitals. We do not often meet with such an example of fertility of resource as was displayed by our confrère Dr. J. M. Junkin, of Easton, in the incident related by him at a recent meeting of the Pennsylvania State Medical Society.|| His account of the operation is so graphic that we wish there were space here to transcribe it in full; but we can only say that the man who, in a lonely farmhouse, performed transfusion successfully by means of

* *New York Medical Record*, March 30, 1874.

† *Transfusion instantanée du Sang*, Paris, 1874.

‡ *New York Medical Record*, April 1, 1874.

§ *Boston Med. and Surg. Jour.*, July, 1874.

|| *Medical Times*, May 22, 1874.

"a glass female syringe with a curved neck, and bulb on the end of it," compels the tribute of our respect.

Concerning the use of transfusion in various forms of disease, many single cases have been recorded by different experimenters, mostly going over old ground, and inconclusive in their results. Meynert has made use of the method in cases of melancholia; Kalischer, in cholera; Klingelhofer, in gastric ulcer; and others in phthisis and other affections.

The latest investigations have taken another direction, and now the question of the day turns upon transfusion by means of blood taken from the lower animals, —a subject of too much importance to place at the end of an article, and of which we shall therefore postpone the consideration until a future occasion.

(To be continued.)

CORRESPONDENCE.

LEIPSIK, October 14, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In accordance with the conditional promise to send you an occasional letter from this place, I forward an account of two matters which have here attracted a good deal of attention. As, however, the least conceited of us like to hear good things of ourselves, let me mention first that not long since I met the chief editor of one of the leading Berlin medical journals. He knew that I was an American, but not that I was a Philadelphian, and, in course of a conversation upon American medical matters, remarked that the *Philadelphia Medical Times* was the best American journal that came to Germany. Now to business.

To-day we celebrated here the jubilaüm of Professor Ludwig, who has completed his twenty-fifth year as Professor of Physiology.

As an investigator, Ludwig is well known throughout the world; but the enthusiasm with which he has been able to inspire those who have studied under his direction, and the warm—I might almost say affectionate—feeling with which all his students regard him, must be seen to be appreciated. To-day such an occasion has offered itself, and any one who had the opportunity of being present must have been convinced that it is, sometimes at least, possible to be both investigator and teacher, in the fullest sense of the words.

At twelve o'clock assembled together in the Physiological Institute not only those who are at present students in the institution, but also many who in past years have had the benefit of Ludwig's teaching. Besides these, his contemporaries, Helmholtz and Du Bois-Reymond, as well as the venerable Weber, came to add by their presence to the interest of the occasion.

An exceedingly life-like bust of Prof. Ludwig had been executed for the occasion, and this, together with an album containing the photographs of all his old pupils, was presented to him. From Russia also came a compound of clock and inkstand, chiefly interesting

on account of certain engravings on its surface representing various instruments devised by Ludwig for the furtherance of physiological research.

There was, of course, a series of congratulatory speeches, to which Professor L. made short and feeling replies, and a number of telegrams were read from various faculties and learned societies throughout the continent.

Later, a dinner was given at the Hotel Hauffe, at the commencement of which, from his place between Helmholtz and Du Bois-Reymond, Ludwig paid a tribute to the memory of those of his students who had died, and in their honor a toast was drunk in silence.

Then Ludwig's health was drunk with all the honors, and afterwards his immediate neighbors were toasted, and the characteristic speeches in which they responded were in the highest degree interesting. Prof. Weber also was addressed in the most complimentary terms, and then general toasting was carried on with most laudable activity. Dr. Kronecker, to whose exertions the very successful execution of the day's programme was in great measure due, came in for a flattering and warm demonstration.

I may be pardoned for mentioning that America was not unrepresented in the oratory of the occasion, Mr. C. S. Minot, of Boston, having made an exceedingly happy speech.

The dinner lasted until quite late, and afterwards the party was received by Professor Ludwig at his own house. In every way the celebration was an extremely interesting one, and the number of participants who came from great distances, and the success which many of them have already attained in various branches of science, went far to prove not only the estimation in which they held him whose jubilaüm they celebrated, but also the great value of a sound early scientific training, even though its special direction is not that which the student eventually follows; and so to-day mathematician and physicist vied with chemist, physiologist, and anatomist in shouting "Hoch!" in honor of the teacher Ludwig.

On the 9th of October occurred the first case of cremation in Siemen's furnace, recently constructed for the purpose, in Dresden. The body was that of the wife of Sir Charles Dilke, M.P., who in her will had given directions that it should be thus disposed of. Permission was obtained from the authorities in Dresden, after deposition had been made that the cremation was regarded in the light of a scientific experiment; and the body, which had been previously embalmed in England, was conveyed to the building containing the furnace. Here it was placed in an oak coffin without a lid, and after it had been introduced into the furnace the process of incineration began, all its steps being readily observed through a door constructed for this purpose. After the lapse of six minutes the wooden coffin was destroyed; in ten minutes the external muscles were completely consumed, and in barely twenty minutes the entire skeleton was exposed, and had begun to crumble; at the end of half an hour the viscera were being rapidly consumed, and at the close

of an hour the bones were reduced to powder. Fifteen minutes later, the ashes were in a fit state to be collected for preservation in an urn. The complete incineration, if the account from which the above was extracted be accurate, was accomplished more rapidly than might have been expected from experiments previously made. The loss of watery matter which necessarily occurs during the embalming and afterwards, may account for this in some measure. Siemen's furnace consists of a fire-brick hearth or oven, with a movable iron top, which can be readily moved aside to admit of the introduction of the body, which is lowered in from an upper story, where the funeral party are assembled. The heat is obtained through the burning of a mixture of gas and air, which is at first caused to heat the hearth from the outside, until most of the moisture is driven off from the body, and afterwards conducted directly into the chamber itself. As soon as charring is thoroughly accomplished the gas is turned off, and merely heated air passes through, the carbonized and glowing mass being thus rapidly supplied with oxygen, and, of course, rapidly consumed. Under ordinary circumstances the first or drying-out part of the process lasts from an hour to an hour and a half, and the whole process perhaps three hours.

October 28, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR MR. EDITOR,—Your remarks upon medical education always appear to me laden with meaning of the deepest importance both to the profession and to the general community, and I sincerely hope you may never weary of the subject so long as anything in the way of improvement is left unattained.

But a paragraph which I saw in the *Times* of the 17th instant bears so strongly upon the same subject that I have ever since been looking in vain to see some allusion made to it in your editorial columns. The paragraph I allude to is copied from the *Homœopathic Review*, and is headed "Slow Progress of Homœopathy in Great Britain." It states, *inter alia*, that there are eighty-seven towns of from ten thousand to one hundred thousand inhabitants in England which have no homœopathic physician.

However much the blessed state of those eighty-seven towns is to be envied, I greatly doubt if they have any equals in this country. Every one knows our deplorable condition in this respect. But how is this state of affairs to be explained? Simply by the fact that in England the average practitioner is a man of much higher professional attainments than the average doctor in this country.

Although homœopathy and gross ignorance of everything which really makes medicine a science may be regarded as convertible terms, yet this fungus has grown to its present enormous proportions in our midst just because in a large proportion of cases—how large I believe it to be I dare not say—the physician does

more harm than good with his drugs, and the homœopathist gains a reputation for success by leaving his patient severely alone.

On the Continent, homœopathy has made even less progress than in England, and for the same reason; and although this medical mysticism was originated by a German enthusiast, it has never succeeded in effecting a lodgment in the land of its birth,—that land of enthusiasts.

The spread of homœopathy in this country is to the medical profession a handwriting on the wall, with a finger pointing to a warning TEKEL.

If our schools were based upon a system similar to that of the German universities, homœopathy would soon be numbered as one of the errors of the past.

Very truly yours,

S. Q. LAPIUS.*

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, OCT. 8, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

SCLEROSIS of the posterior columns of the spinal cord.

Dr. R. M. BERTOLET presented two specimens of this condition, which will form the subject of a later communication to the *Philadelphia Medical Times*. Also, sections under the microscope of the spinal cord presented at the last session, which had been compressed by syphilitic gummata encroaching upon the bodies of the vertebræ.

Dr. PEPPER said that he enjoyed the opportunity, while in Paris, of examining many of Charcot's preparations of the spinal cord at the Salpêtrière, from which the true lesions of infantile paralysis had first been demonstrated. The number of carefully-made observations has now so much increased that it is no longer questioned that one form of infantile palsy depends upon this lesion of the groups of nerve-cells in and near the anterior horn of gray matter.

In regard to this case of sclerosis of the posterior columns, the lesion was the usual and characteristic one of progressive locomotor ataxia, and he believed that the patient from whom the specimen had been obtained, and who had been under his care for some months before his death, had first presented the symptoms of that disease soon after his penis and scrotum had been amputated by a single stroke of a large knife, occasioning copious hemorrhage.

Dr. HARRISON ALLEN did not know whether Dr. Pepper supposed that any relation existed between the peculiar accident and the phenomena of the paralysis, but he thought it not unreasonable that there should have been, conceding the announcement of a favorable predisposing condition. The surgical shock of such

* The editors of the *Times* do not hold themselves or the paper in any way responsible for the statements of correspondents; but only for the fact that correspondents are men of standing in the profession. The columns are open alike for all shades of opinion in regard to professional matters. Editors are as apt to be mistaken in their views as other men of equal judgment and opportunities. By free discussion only can reforms be brought about in a country constituted as is the United States.

an operation, particularly if the organs were excited, must have been very considerable, and could readily have extended to the spinal cord.

Epithelial cancer from the male urethra.

Dr. J. E. MEARS presented a secondary growth from the meatus urinarius of a man aged 40, which was referred to the Committee on Morbid Growths, which reported, October 22, as follows:

"Dr. Mears's tumor removed from the urethra is an epithelial cancer. The papillæ are covered with dense layers of larger flat epithelia, and contain concentrically laminated pearls."

Aneurismal perforation of trachea.

Dr. R. M. BERTOLET presented the specimen, from Annie S., æt. 34, who was admitted to the Philadelphia Hospital but a short time before her death. She was suffering with chronic bronchitis; had a dry hacking cough; slight expectoration, at times tinged with blood; voice very hoarse, often completely aphonic. No radial pulse could be detected in left wrist. Upon Sept. 10 the resident physician, upon his visit, found her sitting in a chair, complaining of feeling a little indisposed. Shortly afterwards, she suddenly fell to the floor, and was expiring by the time the physician—still in the ward—reached her. Spasmodic respiratory efforts were made at long intervals, with blood flowing from her mouth and nostrils. She was dead in less than two minutes.

Autopsy had to be limited to the thorax. Internal surface of the manubrium of the sternum is slightly eroded by the pressure of the aneurismal sac. Lungs are apparently healthy; smaller bronchi filled with clotted blood; valves of the heart competent. The aorta is atheromatous. An aneurismal sac, about the size of a hen's egg, filled with laminated coagula, arising from the transverse arch of the aorta, and partially involving the innominate branch, has greatly compressed and flattened out the anterior wall of the trachea, one inch above the bifurcation. Several of the cartilaginous rings are eroded at this point, and the underlying mucous membrane is perforated. A large clot, extending into the bronchi, is found adherent to the margins of the ulcerations. The tracheal and bronchial mucous membranes are highly inflamed and thickened. A secondary, dissecting aneurismal tumor, of nearly the same size as the first, has formed upon the ascending portion of the aorta, and is likewise filled with a clot. The right recurrent laryngeal nerve is firmly adherent to the aneurismal tumor. Most probably its compression was attended with paresis of the right vocal cord, thus accounting for the troubles in phonation. Unfortunately, no laryngoscopic examination was made.

Dr. ALLEN said that the specimen was one of a very interesting class. He alluded to a case reported by Mr. Fullerton, in which an aneurism of the arch of the aorta passing up between the trachea and œsophagus actually ulcerated into both. Hæmatemesis and hæmoptysis had occurred during life.

Cystic liver from a rat.

Dr. A. C. W. BEECHER presented the specimen, for Dr. ISAAC E. ROBERTS. The rat was found dead, lying in the middle of the cellar floor. Because so found although no poison had been laid for rats, curiosity as to the cause of apparent sudden death led to the post-mortem examination.

The rat appeared to be an old one, was well nourished, but not fat. When opened, the stomach was found distended to its utmost capacity with material resembling moist dirt, having no appearance of food. The intestines were entirely empty. It was neglected to observe whether or not there was an obstruction at the pylorus. The liver was covered with cysts about the size of a pea, each cyst containing a worm

from one and a quarter to one and a half inches long. The liver-structures seemed to be healthy. The specimen was referred to the Committee on Morbid Growths, which reported, October 22, 1874:

"In each of the numerous cysts contained in the rat's liver presented by Dr. Beecher, was found coiled up a single worm, averaging fully an inch in length, with numerous transverse segments (over a hundred proglottides were counted in a single specimen). The caudal joints are contracted and filled with ova. The double row of hooklets upon the head, numbering thirty-two in all, each supplied with the characteristic claw, determines this parasite to be a *tænia solium*."

Acute pericarditis; hypertrophy of heart from previous disease.

The PRESIDENT presented the specimens, from James —, æt. 9; was admitted to the Children's Hospital on September 21. Only very imperfect information of his past history could be obtained. It was stated that he had had symptoms of rheumatism two weeks previously, and that on former occasions he had had attacks of that disease. No symptoms of heart-trouble had been noticed. On admission, there was no swelling or tenderness of any of the joints. There were orthopnoea, great præcordial distress, complete anorexia, and marked general prostration. The pulse was small, quick, and irregular, averaging from 140 to 160 per minute. There was slight præcordial bulging; the area of cardiac dullness was greatly extended, reaching from third rib down to line of apex in sixth interspace, and extending from right margin of sternum to left of line of left nipple. This was evidently due to hypertrophy of the left ventricle, as the impulse was heaving and extruded and reached as far as the lowest limit of dullness. A thrill was felt near left border of sternum. On auscultation, a strong systolic mitral murmur was detected, together with very marked churning and rubbing friction-sounds, whose seat of greatest intensity was along left border of sternum.

He was treated with small doses of calomel (gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$) frequently repeated and pushed to mild salivation; tr. digitalis, gtt. v every four hours; blisters to præcordia, absolute rest, nutritious fluid diet, and $\text{f}\text{3i}$ brandy four times a day. He improved quite rapidly, and in the course of ten or eleven days was able to sit up in a chair, with quite easy breathing, pulse of 85 to 90, fair appetite, no præcordial pain, and diminishing murmur and friction-sounds. Unfortunately, owing to a sudden change in the weather, or to imprudent exposure, he contracted pleuro-pneumonia of the left side on the twelfth day, and died in forty-eight hours.

At the *autopsy*, a moderate amount of pleuritic effusion was found on left side, with consolidation of lower lobe of left lung. The pericardial sac was greatly enlarged: on being opened, it was found to contain four fluid-ounces of blood-stained hæmatin. There were signs of intense pericarditis; around the apex and for a distance of one and a half inches up the body of the heart, the two serous layers were matted together by grayish glutinous lymph. The rest of the serous membrane was coated with false membrane, for the most part not very thick, and with reticulated arrangement. Corresponding to seat of most intense friction-sound were two large patches (one on each layer of the pericardium) of firm lymph, arranged in parallel transverse ridges. The heart was greatly hypertrophied, weighing, with the pericardium attached, over eighteen ounces. There was marked thickening of walls of left ventricle, with considerable dilatation of cavity. The mitral valves were thickened, and their edges fringed with small vegetations. The aortic valves were competent, but were slightly thickened, and had a row of small vegetations on their ventricular surface, near the free border of the leaflets.

GLEANINGS FROM OUR EXCHANGES.

EMPHYEMA TREATED BY FREE INCISION (*The Boston Medical and Surgical Journal*, October 22, 1874).—Dr. J. T. Boutelle reports the case of a boy, æt. 19, who, after repeatedly catching cold, was compelled to take to his bed, with fever, severe pain in right side, etc. When first seen, he had been in this condition for six weeks, was greatly emaciated, had a marked hectic flush, and was sweating profusely both night and day. The physical signs showed that there was a large collection of fetid pus in the right pleural cavity, and an opening in the lung itself near the apex. He was first tapped with an aspirator between the seventh and eighth ribs, about two inches from the lower angle of the scapula, and three pints of brown, fetid, thick, frothy pus were removed. Stimulants and nutrients were ordered in large quantities, and his condition improved somewhat. Four days later, an operation was performed for the purpose of establishing permanent drainage. A knife was passed between the eighth and ninth ribs, about an inch to the right of the lower angle of the scapula, into the pleural cavity, and the incision slightly enlarged on withdrawing the blade. No pus escaped. An india-rubber drainage-tube was then pushed in about five inches, and secured by straps of adhesive plaster. The pump of the aspirator was attached to the tube, but no pus could be drawn through. After injecting a little warm water, without helping matters, the tube was drawn out, the clots were removed from its calibre, and it was re-introduced, but still no pus could be drawn through it. The tube was removed, and a canula introduced, but with no better result. As the patient was growing very weak, crying out with pain, and threatening to faint, the canula was removed, and a poultice applied over the incision.

After an interval of five days, during which his condition rather deteriorated, it was decided to give ether, and to make an opening between the ribs large enough to give exit to pus. A trocar was thrust between the seventh and eighth ribs, at the point where pus had been first found, and, as it began to flow through the canula, the latter was removed, and an incision three inches long was made through the skin, the point of puncture being at the middle of the incision. A careful dissection was made down to the pleura, the cavity of which was opened by an incision of two and one-half inches. About three pints of fetid pus escaped. On examination with the finger, a long, smooth line of adhesion was found a few inches below the incision, passing downward and backward, evidently the bottom of the sac of the abscess.

For nearly two weeks after this operation he continued to do well, his appetite being much improved. It was then found, however, that the opening in the pleura had entirely closed by granulations. The patient was again etherized, the union was easily broken up with the finger, and an opening made the length of the original incision. Not much bleeding. About a pint and a half of excessively fetid pus escaped. A rubber tube was then inserted, and the cavity thoroughly syringed out with warm water containing a trace of carbolic acid. The tube was then fastened in by adhesive strips.

The same treatment was continued, the thorax being washed out daily with warm water; but the patient gradually sank, and died about three weeks after the last operation. No traces of tubercle were found in the lungs.

Dr. Boutelle calls attention to the following points:

The condition of the patient; the long duration of the disease, the excessive sweating, painful bed-sores,

and general prostration rendering it a most unfavorable case for operation.

The immediate relief and gain in strength which followed the evacuation of the pus, the general condition steadily improving up to about two weeks before his death.

The rapidity with which the large incision granulated together, which shows the necessity of guarding against this at the time of operation, by stuffing with lint, or inserting tubes.

The absence of tubercular deposit in the lungs after so much inflammatory disturbance.

The result of the second operation, when no pus was evacuated, showed that it is not *always* safe to enter the thorax very low down. The autopsy showed that this point was nearly two inches too low to enter the cavity.

DEATH FROM THE ENTRANCE OF VOMITED MATTER INTO THE LARYNX (*The Lancet*, October 3, 1874).—Mr. W. W. Smyth reports the case of a child, four years of age, who was under treatment for two small abscesses of the scalp. A small opening was made in one, and the contained matter gently pressed out. During the performance of this trifling operation the boy began to cough, and showed symptoms of suffocation, which were attributed to spasm of the glottis. He revived a little, and was carried to a bed, but in a few minutes the attack returned. He was given nitrite of amyl by inhalation, followed by artificial respiration and electrical stimulation, and, these failing, by tracheotomy. This was also of no avail, and the child soon died. There was no history of his having had anything in his mouth, and nothing could be discovered by careful examination, but the autopsy next morning revealed a piece of partially digested mutton, about the size of a bean, in the larynx, and the right bronchus full of vomited matter. The stomach had evidently thrown up its contents during the opening of the abscess, and, fear paralyzing or otherwise interfering with the sentient apparatus of the glottis, the vomit had been allowed to enter the windpipe.

DISLOCATION OF THE SPINE (*The Irish Hospital Gazette*, October 1, 1874).—Dr. F. W. Warren reports a case of injury to the spinal cord, produced by indirect violence applied to the vertex. There was a displacement forwards of the fourth and fifth cervical vertebrae, with laceration of the inter-vertebral substance. There was at first complete paralysis of motion, including the upper extremities, with partial anæsthesia. Reflex phenomena were excitable in the lower limbs, and there was slight recovery of motion in the toes twelve hours subsequent to the receipt of the injury. Death occurred in about thirty-two hours, being preceded and followed for one hour by a very high temperature, ranging from 103° to 105° Fahr.

SUPPURATIVE INFLAMMATION OF THE GALL-DUCTS (*The Lancet*, October 3, 1874).—Dr. William Bates, F.R.C.S., a distinguished English physician, recently died, after a final illness of only three days. He had, however, been a great sufferer for several years from the passage of gall-stones, and from coincident epileptic seizures. During his last sickness there were jaundice, retention of urine, and coma, but no pain or tenderness over the liver. A post-mortem examination was made twelve hours after death, and the following interesting appearances were observed:

On making an accidental incision into the liver, bubbles of gas escaped freely; the blood was fluid everywhere. On exposing the liver, which was very large, the surface appeared like polished port-wine-colored marble, many patches of lobules, well defined, being more deeply colored than the rest. But what attracted special notice were aggregations of whitish spots here and there, some of them being slightly raised,

suggesting at once disseminated cancer. They proved to be the terminations of dilated bile-ducts filled with pus; some were quite as large as peas, and looked like round cysts on incision. On the concavity of the right lobe, the ducts in one place were enlarged to the size of one-eighth of an inch in thickness, and presented whitish branchings, just like bluish branchings produced by liver flukes. One long white patch was found to be an old cicatrix. The gall-bladder was concealed by old adhesions to the omentum and mesocolon. On dissection, the common duct was found to be so much enlarged that it appeared almost exactly like a portion of small intestine. The gall-bladder was enlarged but not distended. It contained many small black polyhedral calculi, like those which were passed during life, with a thin fluid containing brownish flakes resembling faecal matter rather than bile. The hepatic duct was distended by two large and irregularly-shaped calculi for about two inches and a half; they were each about the dimensions of a bantam's egg, though not the same in form; many projections on each were impacted in enlarged ducts which opened into the hepatic; had they been smooth and roundish, the common duct would have been quite capable of allowing them free egress. All the ducts everywhere were proportionately dilated, and contained calculi of every intermediate size, from marbles to large grains, just like renal lithic gravel. Literally, reckoning these, there were thousands of calculi.

The enlarged ducts were traced, without any difficulty, but simply by free incisions, to the white spots already mentioned.

MISCELLANY.

THE CRY OF THE CHILDREN.—Public attention in France has been much directed of late to the great decrease in the population during the last eight years. The census of 1872 shows a diminution of 370,000 since the census in 1866. Among the causes assigned for this remarkable decrease are, the enforced celibacy of the large standing army of France, the diminution of births in the marriage state, and, lastly, the excessive mortality among infants. One of the first medical men who called attention to this neglect, M. Brochard, affirmed in 1866 that, reckoning pauper children, 100,000 nurse-children die annually in France of hunger, privation, want of proper care, and want of superintendence. The Academy of Science endorsed this statement by crowning the work in which it was embodied. Soon after, M. Felix Boudet renewed this sad accusation, by declaring before the Academy of Medicine that France loses every year by its own fault 120,000 young infants under one year old. This first stage of life gives a considerable proportion of death-rate everywhere, and an eminent statistician has given striking expression to this fact in the observation "that a new-born infant has less chance of living for a week than a man of ninety, and less chance of living a year than a man of eighty." In France, however, in ordinarily favorable vital conditions, M. Bertillon calculates that, up to one year of age, the death-rate averages 21.7 per 100; that is to say, more than a fifth of the children born die at the end of the first year. In Paris, out of 54,000 children who are born every year, nearly half die before their fourth year; and if the children

sent out to nurse be reckoned separately, it will be found that at least one-half (51.6 per 100) have perished in the first year of their life. Finally, if the children be classed according to their position in life, and the kind of nurse with whom they have been placed, the almost fabulous death-rate of from 75 to 80 per cent. is attained, which seems incredible even when we find it stated in official records. The Academy of Medicine has taken up this terrible blot on the civilization of France, and has issued a code of laws for the protection of infant life. Among the causes mentioned in this programme as productive of the general mortality, and which may be reached by legal enactments, are the following: The want of a system for the verification of the deaths of new-born children and nurse-children; the premature taking-out of infants for the purpose of obtaining the certificates of birth and baptism; the putting them out to nurse; the default of measures making vaccination obligatory; the absence of any law to regulate taking children in to nurse, and especially for any administrative and medical watching over the nurse-children; the persistence, especially in country districts, of injurious practices and prejudices, kept up by ignorance, respecting the care required by the children, and the adoption of the system of feeding the children too soon by hand.—*London Medical Record*.

NUTRITIVE MEAT-JELLY COMMENDED BY DR. ANSTIE.—Lean beef fillet, three pounds; lean veal, three pounds; lean mutton, three pounds; cut up small and put into a saucepan *with no water*; simmer (never boiling) by the side of the fire for eight hours; strain the liquid (from a small quantity of tasteless, insoluble fibre that remains), and let it jelly into a soft mass. This is an immensely concentrated *meat*, minus very little but the water which has been driven off; a teaspoonful or two of it is a wonderful support, and can be taken every hour with ease.

THE CHAMPION CHLOROFORM-TIPPLER.—Dr. W. W. Parker related, at the last meeting of the Virginia State Medical Society, the case of a man named Johnson, a blacksmith, who became addicted to chloroform-tipping. How much in quantity he swallowed is not stated, but he bought and drank three thousand dollars' worth in three years! His mind then became affected, and he imagined himself tricked. Meanwhile he fattened fifty pounds, and on ceasing the habit lived fifteen years in good health, and died from natural causes.—*The American Journal of Dental Science*.

THE death is announced of Dr. Arthur Jacob, of Dublin. He was born in 1790, and was the author of numerous papers on medical subjects, but his memory will be chiefly kept alive by the "*membrana Jacobi*" of the eye. He was the founder and original editor of the *Medical Press and Circular* of Dublin.

ONE hundred and thirty thousand pounds of bromine are stated to have been manufactured in the Ohio and Kanawha Valleys last year. One thousand pounds were produced in Pennsylvania.

IODINE CAUSTIC is prepared by dissolving four grammes of iodine in eight grammes of glycerin. It is used in lupus by applying it once every other day, and covering the parts with gutta-percha. This treatment is continued for several weeks.

NOTES AND QUERIES.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The American Public Health Association will convene in Philadelphia, Tuesday, November 10, 1874, in accordance with the adjournment of the Annual Meeting. The following Order of Business has been adopted by the Executive Committee in compliance with Article XII. of the Constitution of the Association:

The meetings will be held at the College of Physicians, corner of Locust and Thirteenth Streets, Philadelphia.

ORDER OF BUSINESS.

Tuesday noon, November 10. The Session commences at noon.

- (1) Registration of Members and others in attendance.
- (2) Introductory Remarks by the President of the Association.
- (3) A Paper on Excessive Infant Mortality in Cities, and the Means of its Prevention, by Prof. Henry Hartshorne, M.D., of Philadelphia, Pa.
- (4) A Paper upon the Influence of Hereditary Diseases upon the Health of the People, with Suggestions of Methods of Prevention. By J. R. Black, M.D., of Ohio.
- (5) The Health of Tenement Populations, and the Sanitary Wants of their Dwellings. By Edward H. Janes, M.D., of New York.
- (6) A Report upon the Death-Rate in Towns of Michigan; and comparison of these with Dr. Farr's *Life Tables* of Health Districts of England. By H. B. Baker, M.D., Secretary State Board of Health of Michigan.
- (7) A Report upon Hospital Construction. By J. S. Billings, M.D., Assistant-Surgeon U. S. Army.
- (8) A Paper upon Hospital Architecture and the Perfect Ventilation of Hospital Wards. By Carl Pfeiffer, F.A.I.A., of New York.
- (9) Conference of Sanitary Officers and others upon Methods and Experience in the Public Health Service.

[Closing at 6 P.M.]

DISCOURSES: TUESDAY EVENING.

First Discourse, by Rev. Samuel Osgood, D.D.: *The Relations of Health and the Higher Culture.*

Second Discourse, by Hon. L. H. Steiner, M.D., of Maryland: *Health a Prerequisite of National Success in Peace and in War.*

Third Discourse: *The Sanitary Relations of Hospitals, and the Economy of Perfect Care of the Sick and Hurt.*

WEDNESDAY, NOVEMBER 11.

- (1) 9 A.M. Business Meeting and Reception of Voluntary Papers, etc.
- (2) A Paper upon the Ground in Relation to Diseases. By Edwin M. Hunt, M.D., President of the Sanitary Commission of New Jersey.
- (3) A Report upon the Deterioration of Vegetables and Fruits, as connected with their Gathering, Transportation, Storage, and Marketing. By S. C. Bussey, M.D., Washington, D.C.
- (4) A Report upon the Sanitary Government, Vital Statistics, and the Methods of Public Health Administration in the Cities and large Towns of North America. By E. Harris, M.D., of New York.
- (5) A Paper upon the question—Does Smallpox become Epidemic, or is it spread solely by its own Contagious Property? By Edwin Snow, M.D., Superintendent of Health, Providence, Rhode Island.
- (6) A Report upon Yellow Fever on the Dry Tortugas. By Harvey E. Brown, M.D., Surgeon U. S. Army.
- (7) 2 P.M. A Discourse by S. D. Gross, M.D., LL.D., D.C.L., Oxon, upon *The Factors of Disease and Death after Injuries, Parturition, and Surgical Operations.*
- 4 P.M. A Conference upon Laws and Methods of the Public Health Service of the different Cities and States. By Officers and Members of Boards of Health.

DISCOURSES: WEDNESDAY EVENING.

First Discourse: By Prof. Charles F. Chandler, M.D., LL.D.: *Practical Applications of Chemistry in the Public Health Service.*

Second Discourse: By Prof. Edward Orton, President of the Ohio Agricultural College: *Certain Relations of Geology to the Water Supplies of the Country.*

Third Discourse: By Gen. E. L. Viele, Civil Engineer: *Principles and*

Practice in Drainage and Sewerage, in connection with Water Supplies.

THURSDAY, NOVEMBER 12.

- 9 A.M. Business Meeting and Election of Officers and Committees.
- (1) State Medicine the Basis for the Elevation of the Standard of Medical Education. By Stephen Smith, M.D., of New York.
- (2) A Paper upon Syphilitic Contamination and Dyscrasia, with reference to Public Health Interests. By Frederick R. Sturgis, M.D., of New York.
- (3) A Paper upon Sanitary Relations of Pharmacy and the Materia Medica. By J. M. Maisch, Secretary American Pharmaceutical Association.
- (4) A Paper upon "Hay Fever:" Original Researches with reference to Causation and Prevention. By George M. Beard, M.D., of New York.
- (5) A Report upon the Sanitary Status of Colorado. By W. R. Whitehead, M.D., of Denver, Colorado.
- (6) A Paper by Hon. Lorin Blodget, of Washington, D.C.
- (7) Voluntary Reports and Papers.
- 4 P.M. Sanitary Conference upon Laws, Methods, and Experience in Public Health Service.

DISCOURSES: THURSDAY EVENING.

First Discourse: By Hon. Dorman B. Eaton, of Washington; *Health Laws and the Interests and Obligations of the State and National Governments pertaining thereto.*

Second Discourse: *The Duty and Resources of the National Government in the Encouragement of Public Health Measures and Sanitary Science.*

EXECUTIVE COMMITTEE:

President, Stephen Smith, M.D., New York; *First Vice-President*, Edwin M. Snow, M.D., Rhode Island; *Second Vice-President*, C. B. White, M.D., Louisiana; *Secretary*, Elisha Harris, M.D., New York; *Treasurer*, John H. Rausch, M.D., Illinois. S. O. Vanderpool, M.D., N.Y.; Edward Jarvis, M.D., Mass.; J. M. Toner, M.D., D.C.; Moreau Morris, M.D., N.Y.; J. J. Woodward, M.D., U.S.A.; A. N. Bell, M.D., N.Y.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Philadelphia County Medical Society will be held Wednesday, November 11, at 8 o'clock P.M.

Dr. H. Lenox Hodge will read a paper on the subject of Excision in Hip-Joint Disease.

All regular practitioners of medicine in the city are invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 27 TO NOVEMBER 2, 1874, INCLUSIVE.

SUMMERS, J. E., SURGEON.—Assigned to duty as Medical Director of this Department. G. O. 19, Department of the Platte, Oct. 24, 1874.

The following-named officers will report in person to the President of the Army Medical Board, now in session in New York City, for examination for promotion, and, on its completion, rejoin their respective stations: Assistant-Surgeons Albert Hartsuff, J. H. Janeway, J. R. Gibson, J. M. Brown, H. E. Brown, and Elliott Coues. S. O. 233, A. G. O., October 27, 1874.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Board, now in session in San Francisco, for examination for promotion, and, upon its completion, rejoin his proper station. S. O. 233, c. s., A. G. O.

CRONKHITE, H. M., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, to report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General, Department of Arizona, for assignment to duty. S. O. 233, c. s., A. G. O.

ROSE, GEORGE S., ASSISTANT-SURGEON.—Relieved from duty in Department of Arizona, to report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, by letter to the Surgeon-General. S. O. 233, c. s., A. G. O.

ELBERRY, F. W., ASSISTANT-SURGEON.—Granted leave of absence for six months, with permission to go beyond sea. S. O. 234, A. G. O., October 28, 1874.

MATTHEWS, W., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Hamilton, New York Harbor. S. O. 213, Military Division of the Atlantic, October 28, 1874.

DICKSON, J. M., ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General, Department of the South, for assignment to duty. S. O. 233, c. s., A. G. O.

SATURDAY, NOVEMBER 14, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE USE OF DIGITALIS IN DISEASES OF THE HEART.

No. I.

Delivered at the Philadelphia Hospital

BY H. C. WOOD, JR., M.D.

Reported by Dr. JOHN GUITÉRAS.

THERE are, gentlemen, primary physiological facts concerning the action of digitalis which I shall to-day lay down somewhat dogmatically as the premises for the discussion of the subject. I do this because time is wanting in which to give you the proofs of these premises, even if they were not out of place in a clinical lecture-room; and I do it the more willingly because those of you who may be inclined to be skeptical can find these proofs in detail in my treatise upon therapeutics.

By experiments on the lower animals two things have been definitely ascertained: 1, that in the lower animals digitalis is a very powerful stimulant to the inhibitory apparatus of the heart; and 2, that it is also a powerful stimulant to the muscular substance or its contained ganglia.

We know the first because after the administration of the drug, when the heart has already been affected by it and is beating slowly, if the inhibitory nerves be cut, the organ springs, as it were, into an intense rapidity of action. The drug stimulates the cardiac muscle, because the amount of work performed by the heart is vastly increased under its influence, even when the viscus is disconnected from the body. We also know as a probable fact that digitalis causes a general vaso-motor spasm, a contraction of the muscular walls of the vessels. Thus much for the observations made on the lower animals.

When digitalis is administered to man, the first thing we observe is a diminution in the number of heart-beats and an alteration of the character of the pulse, which becomes full, and hard, and strong. You can recognize by the feel of the blood-wave that both the force of the contraction of the heart and the amount of blood thrown out during the systole are increased. If the drug is given in poisonous doses the pulse may, it is true, become rapid, and smaller than normal. The meaning of this can be explained by referring again to the animal. We find that here the same phenomena are observed, and that if a very large dose is given the heart may be suddenly arrested in systole from irritation of the cardiac muscle; before this happens, for a time, the tendency to contract is so great that the systole will occur before the complete filling up of the cavities. Two short imperfect waves are thus produced instead of one long one: this is the double beat,—forming a dicrotic pulse. In man the “dicrotic

pulse” of digitalis is classical, and its mechanism is evidently the same as that of the double arterial wave in the lower animals: instead of a long pause and a full dilatation, the first attempt at diastole is interrupted by an abortive systolic contraction. As in animals, probably in these cases also, the apex of the heart scarcely relaxes at all. Again, a person under the influence of digitalis may have a heart beating 50 or 60 per minute when in the recumbent posture, but on sitting up the pulse may suddenly become weak and mount to 100 or 120. The action of digitalis has been carried in such a case to the point at which an excess will throw stimulation into overstimulation and imperfect contraction. The act of rising brings an extra strain on the heart, and the muscle loses its power of regular action.

Digitalis, then, in man, by its action on the inhibitory apparatus, prolongs the period of diastole, thus giving time for the ventricles to fill up with more blood than usual, and also increases the muscular power of the heart, so that when it contracts a greater volume of blood is thrown with a greater force into the arterial system. Before we begin to apply these principles, remember also that the vascular system under the control of the vaso-motor nerves is probably kept in a state of contraction by the influence of digitalis.

Almost nothing but common sense is needed now to apply these facts to the treatment of heart-diseases. If what has been said is true, digitalis ought to be useful when there is a deficiency of heart-power. Remember that it is not a rag that will stop up a leak; and do not fall into the common error of expecting the drug to perform impossibilities. It cannot tighten a leaking valve. It cannot open and smooth down a contracted orifice. In other words, in valvular lesions it can only indirectly remedy the defects; and, although often you will get the most surprising results from its use, yet in every case of valvular lesion there comes, sooner or later, a stage when digitalis is powerless. It is when the valves are healthy, and the cardiac failure is due simply to weakness of the muscular walls, that digitalis exerts its most wonderful powers. Nothing is more marvellous in clinical medicine than the relief you can sometimes rapidly afford in cases of simple dilatation of the heart. The following extract from my private note-book will probably do more than any declamation to impress this fact upon you:

Mr. D., æt. 55, when first visited in the morning was found in a condition of intense cardiac dyspnœa. There was no cardiac murmur, and nothing to indicate a valvular lesion; but the heart-sounds were very feeble, and the impulse was exceedingly weak and fluttering; its area as well as that of the percussion-dulness was widely extended. The urine was albuminous, and the patient was passing only three or four ounces in the twenty-four hours. The sick man sat during the whole day and night leaning against the back of a chair, struggling for breath. He would fall asleep for an instant, the respirations becoming feebler and more and more distant, until the face grew livid and death-like, when suddenly he would awake with a violent

start, and enter upon a succession of labored, gasping, struggling respirations. In three or four minutes he would become quiet; then the respirations would grow slower and slower until at times they would be entirely suspended for nearly a minute, when he would awake with a start as before. For several weeks, under the care of a notorious dispenser of diluted nothings, this man had spent in this manner nights and days of horror with death staring him in the face. He assured me that he had not been conscious of sleeping for over a week, and that he only wanted to get sufficient relief to allow him to get to his home in the far West and make some business arrangements before going the long journey. He was ordered fifteen drops of tincture of digitalis every two hours. At the end of twelve hours the effects were already manifested. The pulse had fallen from 102 to 94, and it was fuller and stronger than before. The agony of the spells was slightly relieved by the administration of morphine. Quinine and stimulants were also given. In the next twenty-four hours seventy-five drops of the tincture were given, and the pulse fell to 84 and became full, strong, and regular. He passed over a pint of urine. During the ensuing night the patient took no digitalis, and his pulse was not so strong in the morning as it had been, although only 86; during the day following he was given forty-five drops of the tincture; in the twenty-four hours he passed one and a half pints of urine.

Not to weary you with details, I will tell you that, continuing the use of the drug, in the course of two or three days the spells of dyspnoea almost disappeared, and he was able to sleep in his bed. In a few weeks this man returned to Omaha, where he died suddenly a few weeks later.

Let me give you, gentlemen, another lesson from my note-book:

A physician leaving town for a few days asked me to take charge of a lady patient of his, whom we found in our visit together very much in the same condition as the case just described. She had been taking five or ten drops of tincture of digitalis three times a day. I suggested a large increase of the dose; and my friend, turning to the patient, said, "Doctor, this woman has been in this chair many weeks; I have done all I could for her, but life is a heavy burden to her: she wants to die. You can't do more than kill her: if anything offers a prospect of relief, she wants it, no matter what are the risks. She is well pleased to have you kill her." The patient nodded acquiescence. It was the strangest scene I ever witnessed in a sick-room. Digitalis was therefore ordered in large and constantly-increasing doses. The result was that, a few weeks subsequently, when my colleague returned and rang the door-bell of the house, this woman came down from the third story to let him in.

The dilated heart is weak, and also is embarrassed by that weakness. Owing to its want of power, the circulation begins to fail; then instantly through the nervous system come the demands from all the tissues: more blood, new blood, better blood, is wanted. The heart is irritated beyond measure; it gets flustered, as it were, and its beats become rapid, irregular, and even more inefficient than at first; the diastole never lasts long enough for the ventricle to fill itself, the systole for the ventricle to empty itself. Then it is that digitalis lays its strong grasp upon the organ and bids it keep still; it gives it time to fill itself with blood, and power to propel this blood through the system. In this way it is that the tissues, being satisfied, cease

to urge the heart, that the lungs clear, and the dyspnoea abates.

Never as long as you live, gentlemen, give, in these cases of rapid pulse with cardiac weakness, aconite or veratrum viride. They are the very antagonists of digitalis, and when the latter does good they would act as true poisons.

Suppose we now consider the opposite extreme to dilatation,—namely, hypertrophy of the heart; where the organ heaves and throbs and the whole frame is shaken by the powerful impulse. Digitalis will very readily bring about in this heart a condition of spasm, and the patient may drop dead from syncope, depending upon a contracted heart. Thus digitalis, by stimulating a muscle already too powerful, does harm in simple hypertrophy of the heart. Here it is that veratrum viride and aconite are of service. Veratrum viride, whilst stimulating slightly the inhibitory apparatus, weakens most decidedly the muscular force of the heart. Under its use the pulse grows weaker and smaller.

There is another disease of the heart not connected with valvular lesion, in which digitalis is of great service. I refer to the irritable heart. It is most frequently found in soldiers, and in persons subjected for a long time to muscular strains.

As an instance of this irritable heart occurring in civil life, I mention the following case which I recently saw. A robust young man was in training for a rowing-regatta on the river. After a while he began to lose his wind sooner than his companions; and at last he had to give up the exercise altogether, for he was hardly able to walk up-stairs without severe palpitations and distress about the heart.

Irritable heart is nearly always due to over-strain of the viscus, is generally associated with weakness, and usually tends towards the production of cardiac dilatation. It is, I suspect, in some measure dependent upon a loss of power in the cardiac inhibitory apparatus. For obvious reasons, then, in most cases of irritable heart digitalis is of the utmost service. In some instances, however, the tendency is towards hypertrophy, and not towards dilatation. Under such circumstances, veratrum viride, not digitalis, is indicated.

In valvular disease with dilatation there always is weakness of the heart. Here the effect of digitalis is not so marked as in simple dilatation; but still, by regulating the heart's action, it probably diminishes the leakage of blood, and, by giving strength to the muscle, makes up to a certain extent for the deficiency.

Some of you may have seen me prescribe digitalis in cases of hypertrophy with valvular disease, and you may think that I contradict myself; but it is not so. The mere existence or non-existence of hypertrophy in a case of valvular disease is no criterion for the administration of the drug. The point to be decided is whether there be or be not *relative* hypertrophy; whether the increase in the strength of the cardiac muscle has or has not been proportional to the increase in the work required of it. To make this clearer, let us suppose that the healthy heart has to exert a force equal to 100 to pump the blood through the system. When there

is a leakage, the amount of work being increased, the amount of force needed will also be much greater. Suppose that the amount of work needed of the diseased heart then equals 200. It may be that hypertrophy shall occur under these circumstances to such an extent as to double the cardiac power; then all will be well: double work and double power will mutually balance each other. If, however, the increase of power shall fall short, amounting only, let us suppose, to 150, the organ is really in the condition of dilated heart. It is not the amount of power in the muscle, but the proportion of power to the demand, that is the question. A heart may be absolutely hypertrophied, but relatively dilated. Hence it is that the great question for the therapist is not to know which valve is diseased, but whether there is force enough for the demand. This is the criterion that must guide you in the administration of digitalis.

Practically, I believe the minute diagnosis of the exact character of the valvular lesion is often not important, and the question as to the availability of digitalis may be determined by studying the condition of the system. If the heart cannot pump the blood with sufficient power, of course the arterial system will be comparatively empty, whilst the veins will be full. Imagine the mitral valve to be eroded; at each contraction of the left ventricle there is a certain amount of blood thrown back into the auricle; this becomes distended, and cannot empty itself properly; the pulmonary veins opening into the auricle become engorged, and fail to carry the aerated blood away from the lungs. These become congested, so that the right heart, whose business it is to pump venous blood into the lungs, fails to do so properly, becomes distended, and prevents the unloading of the venous system through the two *venæ cavæ*; as a consequence of this general venous engorgement, *œdema* and *dropsy* come on. Almost always when you have venous congestions and dropsies the heart is weak; and you may set it down as a practical rule, with exceedingly few if any exceptions, that cardiac general venous congestions and dropsies call for digitalis.

In concluding this lecture, I call attention to the man before you as illustrative of the value of digitalis in giving temporary relief in cases of the most desperate and hopeless character. You will also notice the fact that in my treatment I have been guided by the general symptoms rather than by the cardiac lesion. Owing to the irregular and feeble action of the heart, the indistinctness of the murmurs, and the fact that auscultation distresses the patient exceedingly, I have been unable to make a positive, accurate diagnosis; in fact, at my first visits the condition of the patient was such that I did not even attempt a cardiac examination.

George R., *æt.* 43, German; shoemaker; admitted Oct. 3, 1874, into the house, complaining of nothing but dyspnoea, with which he had been suddenly attacked a month before, whilst working in a damp cellar. The dyspnoea was very great; the urine albuminous; the abdomen very hard and tender. There were two marked lateral areas of dulness, which presented distinctly the outlines of the liver and spleen, the edge of

the liver-dulness extending to within one inch of the crest of the ilium. There was some *œdema* of the feet. All these various evidences of damming back of the blood in the abdominal organs betrayed an intense cardiac obstruction. On the morning of the 6th of October the patient's pulse was 112, very nearly what it had been since admission, and he had passed only eighteen ounces of urine in the last twenty-four hours. He was then ordered $\text{f}\frac{3}{ss}$ of infusion of digitalis every three hours. To-day, the 10th of October, the shortness of breath is better, and he eats better, because the congestion of the stomach has been relieved. We must expect to find also a similar relief in the other abdominal organs. On percussion, the liver-edge is found two inches higher up than at the last measurement. The enlargement of the spleen has almost disappeared. The pulse, which was exceedingly weak, has become large and hard, and does not reach above 100. The congestion of the kidneys has been much relieved: we find that he now passes thirty-six ounces of urine in the twenty-four hours.

This man, then, has been very much improved, and yet we do not know what is the matter with his heart. The presence of so much portal congestion would seem to point towards the existence of disease of the right heart.

At a future lecture, gentlemen, I shall point out more in detail how digitalis is of value in especial cardiac valvular diseases, and how it is sometimes absolutely curative, and shall also speak of its danger and mode of administration.

ORIGINAL COMMUNICATIONS.

SCLEROSIS OF THE SPINAL CORD, WITH ATROPHY OF THE MOTOR CELLS IN THE ANTERIOR HORNS OF THE GRAY SUBSTANCE.

Read before the Pathological Society of Philadelphia

BY R. M. BERTOLET, M.D.

THE first series of specimens exhibited under the microscopes are transverse cuts of the spinal cord of an ordinary case of locomotor ataxy. The clinical records of the case are preserved by Dr. Pepper.

The alterations that have occurred in this cord have been limited chiefly to the posterior columns, giving rise to such decided gray degeneration in this section as to be distinctly visible to the naked eye; the translucent wedge-shaped segments, extending from without inwards, along both sides of the posterior fissure and cornu, penetrate up to the commissure. Here, microscopically, all the medullated nerve-fibres have disappeared, their places being taken up by anastomosing bands of fibrillated connective tissue: in other words, there has been an active proliferation of the neuroglia, in consequence of which the nerve-fibres have gone under; numerous corpora amylacea being the only traces indicative of their former existence. Here and there an axis-cylinder can still be detected. This sclerosis or gray degeneration of the posterior

columns is traceable from the cauda equina up through the entire length of the cord: unfortunately, the medulla and brain of this interesting case were ruined by being placed in an improper hardening solution. This gray degeneration of the white substance does not extend into the lateral columns, nor is there any decided lesion discernible in the gray substance proper, beyond the too homogeneous appearance of the stroma. The multipolar cells do not appear smaller than in the normal cord; no appreciable alteration is found in them; certainly their number is not diminished, nor is there any diminution of the size of the anterior cornu itself.

FIG. 1.



Transverse cut through the lumbar enlargement of the spinal cord.—Case of locomotor ataxy.

S S, the sclerosed posterior columns.

P C, posterior horns.

A C, anterior horns.

M C, motor cells of the anterior horns, which are grouped into E L, the external lateral, A E, antero-external, and I, the internal group.

My object in presenting these sections and the drawings of this typical case of progressive locomotor ataxy is to contrast them with the lesions found in the cord of a well-marked case of infantile spinal paralysis.

In the second set of specimens the microscopic sections also reveal the presence of extensive sclerosis of the posterior columns, showing the same exuberant development of connective-tissue fibres; in addition, there are seen disseminated in the anterior and lateral columns small isolated patches where a like indurative process is being developed,—*sclérose en plaques*. But by far the most interesting changes are those that have taken place in the anterior cornua of the gray matter (*vide* Fig. 2).

With a low power scarcely any of the large multipolar nerve-cells, ordinarily as thickly strewn in the anterior horns as the leaves in Vallombrosa, can be seen; while the lesser groups of these cells situated in the posterior horns, being more deeply stained by the carmine, appear in striking contrast with the surrounding tissues. A higher objective also fails to reveal most of the nerve-cells of the anterior cornua, which are conveniently, though not strictly, classified in three groups: 1, a large

external lateral group; 2, a small antero-external group; and, 3, a smaller internal group.

In these specimens it will be seen that the first group of motor cells has nearly disappeared, their places being occupied by a dense fibrillated mass, packed with inflammatory corpuscles; while in the second group but few of the motor cells remain. These are shorn of their long process, their nuclei and nucleoli being concealed by coarse granular pigment-matter, and their edges more or less corrugated: in short, they are seen in the various stages of atrophic changes. The smallest and internal group of these cells alone remains unaffected, the caudal prolongations and nuclei being clearly visible.

It may also be observed that several enormously dilated vessels are seen coursing in the gray matter of the anterior cornua.

FIG. 2.



Transverse cut of spinal cord through the lumbar enlargement.—Case of infantile spinal paralysis. There exists marked sclerosis of the posterior and anterior columns; not represented in the drawing. Great diminution in the size and number of the nerve-cells will be observed at E L and A E, the external and antero-lateral groups, while I, the internal group, remains unaltered. V V represent large blood-vessels in the anterior horns.

These changes were most marked in the region of the lumbar enlargement, whence the cuts that are exhibited were obtained. Sections through the brachial enlargement left no doubt that the process had already ascended to this point.

Whether an actual diminution in the size of the anterior cornua has occurred from the atrophy of the nerve-cells is a matter not so readily determined, since both cornua are in this case affected in about the same degree. This diminution is, however, very apparent when only one limb is paralyzed, as in a case of infantile paralysis reported by Charcot,* and in another by Prof. Roth.† T. Thompson Dickson‡ also observed the same phenomenon in the spinal cord of a patient who had suffered amputation of the right leg fifteen years before death. Prevost and David§ found a like

* Leçons sur les Maladies du Système Nerveux, Paris, 1873, p. 59.

† Virchow's Archives, Bd. 58, S. 263, 1873. Infantile Paralysis, with complete Bibliography.

‡ Transactions of the London Pathological Society, vol. xxiv., 1873, p. 3.

§ Arch. de Physiol. Normal et Pathologique, Juillet et Septembre, 1874, planche 24.

appearance in the right horn in a case of muscular atrophy of the thenar eminence.

Were all other proofs wanting, the data alone obtained from these cases of unilateral fascicular sclerosis would be sufficient to establish beyond all controversy the functions of the large multipolar cells of the anterior horns.

The entire length and thickness of all the white fasciculi may be so far involved in this process of sclerosis that not a single nerve-fibre with its axis-cylinder can be found, and yet the muscles do not suffer directly in their nutrition so long as the nerve-cells maintain their integrity.

It is a fact now generally recognized that the lesions of progressive locomotor ataxy, although most frequently characterized by sclerosis of the posterior columns, as in the typical case above, may at times have their seat in the lateral or anterior columns. Sooner or later the slow chronic irritative processes extend towards the gray axis of the cord and consecutively involve the anterior nerve-cells, causing them to atrophy and disappear in the contracting horns. It is then that the locomotor ataxy becomes complicated with progressive muscular atrophy. Cases illustrative of this point are given by MM. Pierret* and Charcot,† and others. This consecutive involvement of the anterior horns in Duchenne's disease is stated to occur in about one-eleventh of the number of cases.

In infantile spinal paralysis, on the other hand, the development or extension of the sclerosis to the anterior horns has lately been frequently observed. Through the kindness of Drs. Parry and Jenks, I have been enabled in three cases of infantile spinal paralysis to convince myself of the existence of the most profound alterations in a great number of the motor cells, and disappearance of others. Fig. 2 is taken from one of these cases.

Remarks.—Whenever we have superadded to the symptoms of spinal paralysis those of muscular atrophy, be the case one of paralysis in the adult or infant, we may, with the greatest degree of probability, expect to find alterations in the motor cells, since there is not a single well-authenticated case on record showing muscular atrophy as a result of the spinal lesion, where the motor cells have preserved their integrity. In these cases the muscular atrophy is unquestionably induced not by a primary affection in the muscles themselves, but is consecutive to the myelitis,—the evidences of myositis and fatty degeneration of the muscular fibres sometimes observed being therefore of secondary importance, and perhaps altogether accidental.

There are still many conflicting opinions held by different pathologists as to whether the lesions in the motor cells are primary or secondary to the inflammation of the surrounding tissues. Roth‡ is inclined to accept the latter theory in all cases, and this propagation of the inflammatory process along

the neuroglia to the anterior horns with the secondary involvement of the nerve-cells cannot be denied to occur in certain cases of central myelitis, spinal pachymeningitis, and tumors of the cord. Charcot,§ on the other hand, regards the lesions of the motor cells as primary in typical muscular atrophy, in infantile spinal paralysis, and in the spinal paralysis of the adult. The exact localization and limitation of the lesions in certain cellular groups is certainly a very strong argument in favor of their being affected *ab initio*. A very interesting case has recently been published|| where congenital atrophy and loss of power in all the muscles of the right thenar eminence were attended with a decided diminution in the size of the right anterior horn, and disappearance of its lateral motor cells. The lesion was most pronounced in the region of the seventh cervical nerve, not extending beyond the sixth and eighth; the white substance presented no appreciable alterations. The constantly increasing number of such cases where the alterations are seen confined to the anterior horns, leads us to believe that the nerve-cells are often the primary seat of the irritative process; although in each of the three cases of infantile paralysis examined there was found sclerosis of the white substance as well as in the gray axis.

The clinical histories of these cases of spinal sclerosis, even when the motor cells are involved, as manifested by the progressive muscular atrophy, generally show a very protracted affection, seldom in itself fatal unless the nerve-cells of the nucleus of the hypoglossal and of the spinal nerves are also involved at the same time as those of the brachial enlargement; then a fatal termination is prematurely induced, the symptoms of glosso-labial paralysis being superadded to the ordinary disturbance of the muscular atrophy.

It was formerly asserted that sclerosis of the lateral columns in itself is sometimes accompanied by general muscular atrophy; but later researches by the eminent neural pathologist Charcot¶ show that this is not the case unless the process has extended to the anterior horns. In a newly-described form of muscular atrophy resulting from this lateral amyotrophic sclerosis, the author, in the paper just referred to, draws attention to the predominance of the atrophy in the upper extremities, while it is at minimum in the legs, amounting to a mere simple paralysis. The arms in this affection, in spite of the paresis and rigidity, still are capable of performing certain movements, but with a trembling motion, which recalls to mind the shaking palsy observed in *scélrose en plaques*. In the few cases so far observed, a relatively short period, seldom extending beyond three years, elapsed before a fatal termination. The existence of this peculiar form of muscular atrophy, affecting uniformly all the muscles of the limb, needs further confirmatory observation.

* Arch. de Physiol., t. iii. p. 592.—Sur les Altérations de la Substance grise de la Moelle épinière dans l'Ataxia locomotrice.

† Loc. cit.

‡ Loc. cit.

§ Loc. cit., pp. 60-66.

|| J. L. Prevost et C. David, Arch. de Physiol., Juillet et Septembre, 1874, planche 24, p. 595.

¶ Gaz. Méd., Nos. 31 and 32, Août 1, 8, 1874.—"Scélrose primitive et amyotrophique."

ON PIGMENT-FLAKES, PIGMENTARY PARTICLES, AND PIGMENT-SCALES.

BY JOSEPH G. RICHARDSON, M.D.,

Microscopist to the Pennsylvania Hospital.

THE present paper is designed to direct attention to what I conceive to be an egregious error, by which several microscopists of acknowledged ability have been ensnared,—namely, a belief in the importance of the “pigment-cells” or “scales” described by Frerichs, of Berlin, as occurring in blood;* of similar bodies found by Drs. Meigs and Pepper, of this city, under like circumstances;† and of the “pigmentary particles” or “celloids” figured by Dr. William Roberts, of Manchester, England;‡ all of which I assert to be simply and solely *accumulations of dirt* (especially the remains of red blood-corpuscles) in the little excavations on slides in ordinary use.

Such an accusation as this will, no doubt, at first excite astonishment or even ridicule, but of course no sane man would dare to bring forward a charge of this kind without strong evidence in its favor. This evidence I ask each one of my readers to furnish me after trying this simple experiment:

Examine an ordinary plate-glass slide microscopically for *dirt-pits* containing brownish-red matter which may be oxide of iron, or, if the slide has been long in use, old red corpuscles. If there are none already filled up with “pigment,” rub in faithfully a little blood, by which means you can sometimes fill the shallow cavities with the débris of the red disks, and so imitate quickly the effect ordinarily produced in a gradual manner by frequently wiping small quantities of blood over the glass. Lastly, clean off the slide perfectly bright (so as to be sure you leave nothing but artificial *sells* upon it), and examine with a power of 250 diameters.

The bodies you probably find are accurately described by Dr. Roberts as follows:§ “Pigmentary particles; these objects deserve a passing notice from the fact that they are frequent, almost constant, if not absolutely constant, objects in urinary deposits, and have not hitherto been described. . . . They never exist in such quantity as to form the entire (*sic*) of a visible urinary sediment; they are only to be recognized by the microscope. They appear especially under two conditions—namely, as free amorphous particles and cell-like bodies (or celloids). . . . The cell-like particles have a peculiar appearance, very difficult to explain. They never present an unmistakably cellular character; they appear flat, never spherical. Their outline is generally an oblique ovoid. Within this outline, which is generally of exceeding delicacy and of perfect definition, lie masses of red or orange pigment, exactly resembling the free amorphous particles already described.”

Frerichs, after pointing out similar objects, says||

that accurate diagnosis can be made in malarial fever by examining the blood for them, since a few drops “are sufficient to determine the presence or absence of large quantities of pigment.”

Drs. Meigs and Pepper report finding pigment-particles in the blood of eighty-nine patients; but later these acute observers seem to have had shrewd misgivings respecting their importance, although without feeling satisfied as to their real origin.

My own suspicions were excited years ago by Frerichs’s pigment-scales, and experiments on hundreds of specimens of blood from malarial and other cases convinced me of their delusive character.

Very recently, Dr. James Tyson, of this city, whilst examining in committee some ovarian fluid, pointed out to me several of Roberts’s pigment-flakes, and said he had prepared drawings of these bodies for his forthcoming work. His statement naturally led me to a careful and prolonged study of the objects in question, and this in turn forced upon me the conviction above expressed.

Excluding carbon-particles (from the air), I attribute the peculiar shape of pigment-flakes which Roberts finds so “very difficult to explain” (admirably shown by Dr. Tyson in his plate), to the conchoidal figure of the minute chipped-out cavities in plate-glass; which little pits have, indeed, proved veritable pitfalls to unwary travellers over the microscopic field. These same shallow, shell-like excavations before being filled up with dirt are, probably, Frerichs’s “coagula of a hyaline character, which resemble in form” (as they have a perfect right to do) the pigment-flakes, and are also Roberts’s “bluish mother-of-pearl” celloids.

Dr. Roberts concludes, “I have been in the habit of noticing these objects for many years, and have regarded them as derivatives of hæmatin, but how they come to assume their peculiar forms I cannot conjecture.” With him, I believe them to be “derivatives of hæmatin,” but only by the *rubbing process* detailed above; and I trust that my “conjecture” as to how these hæmatin-flakes “come to assume their peculiar forms” will be satisfactory.

It seems almost incredible that the recorded appearance of these “flakes” in such various and inconsistent localities—viz., in blood, urine, the brain, in tumors, and even in the breath—has hitherto aroused no suspicion of their true nature; and it is only when we remember how few investigators have minds achromatic enough to enable them to see objective facts without subjective coloring, that we can offer a plausible explanation of this remarkable phenomenon. Does not the delusion which, if I am correct, has thus entangled several eminent observers, form one of the most curious episodes in the history of medical microscopy? and should it not serve as a warning to future generations of students?

Nevertheless, being always open to conviction, I hereby challenge any devout believer in pigment-flakes to bring me an honest specimen of urine, or blood from any ordinary case of disease, in which can be demonstrated either pigment-flakes, pigmentary particles, or pigment-scales.

PHILADELPHIA, November 7, 1874.

* Clinical Treatise on Diseases of the Liver. Sydenham Soc. Translation, London, 1860, vol. i, p. 320.

† Pennsylvania Hospital Reports, Phila., 1868, p. 108.

‡ Urinary and Renal Diseases, Second American edition, Phila., 1872, p. 125.

§ Op. cit., p. 124 et seq.

|| Op. cit., p. 355.

IS CENTRAL PARALYSIS ONE OF THE TOXICAL EFFECTS OF THE SULPHATE OF ZINC?

BY B. F. POPE,
Assistant-Surgeon U.S.A.

MARTHA H., colored, æt. 30, a very fat, large-framed, full-blooded, and apparently healthy woman, complained to me on the 1st of July, 1874, that she had suddenly and entirely lost the use of her left hand and arm. She said that she had received no injury of either head or spine; and, furthermore, she had no recollection of headache, vertigo, or nausea prior to her attack.

Beyond this isolated fact of the loss of motor power, and a slight tactile insensibility, I could find no correlative symptoms during the first three days of her illness.

For various reasons, I was in the beginning somewhat inclined to suspect her of malingering, especially as the electro-muscular contractility was not impaired. On the fourth day, however, there was dragging of the left leg, immobility of the left facial muscles, and a dextral curvature of the tongue on its protrusion, with some thickness in speech.

In stooping, her arm dropped forward, and in walking, which she accomplished clumsily and with effort, it swung helplessly at her side.

I considered this to be an assemblage of symptoms that could hardly have been feigned by a person of her limited intelligence and power of mimicry. So I was obliged to relinquish the idea. As stated, the *cause* of her attack is apparently without explanation, save that it may be found in the following circumstance.

One week before, she had called upon me for relief from a severe and rather protracted attack of gonorrhœa. For this I prescribed an intra-vaginal injection of a solution of the sulphate of zinc,—five grains to each ounce,—to be administered on retiring for the night. She continued its use seven days; her gonorrhœa ceased one day before her paralysis appeared, and did not return again. Now, whether this sudden and unaccountable paralysis was due to the toxic effect of the sulphate of zinc, or to a suppression of her gonorrhœal discharge, or to neither, is a question of considerable moment; and for the purpose of eliciting other experience than my own I would make inquiry of some of your numerous readers for any similar cases that may have occurred within their knowledge.

The subsequent history of Martha H. is without interest, as her recovery took place within six weeks, under the tri-weekly application of both general and localized faradization. At this date (October 17, 1874) her cure is apparently perfect.

FORT STOCKTON, TEXAS.

RUPTURE OF THE SPLEEN (*British Medical Journal*, Sept. 26, 1874).—A lady aged 35, who had been subject to dyspepsia, and had suffered greatly from gastric pain due to an irritable stomach, died after a very short illness. The autopsy revealed an idiopathic rupture of the spleen, no symptoms of which had been detected during life.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

CLINICAL SERVICE OF DR. ALFRED L. LOOMIS,

Professor of Pathology and Practice of Medicine at the University of the City of New York, Medical Department.

RHEUMATOID ARTHRITIS; HÆMOPTYSIS.

PROF. LOOMIS delivered a clinic as above, on Tuesday, October 20. He appears to be very popular with the students and others, and always draws a good attendance. His lectures partake rather of a conversational character. Two or more students of the advanced class are called upon to assist in studying the disease, in making the diagnosis, and in suggesting a line of treatment. It was so in this case, which will account for the peculiar manner in which some portions of the following are presented. He said,—

Gentlemen: We have this afternoon two interesting cases.

Case I.—Here is a woman whom I present especially to show you the condition of affairs described to you already in my lectures. I told you that there were deformities occurring in connection with chronic articular rheumatism. It is not necessary for us to make a diagnosis in this case. You see readily the position which the lower limbs have assumed: they are perfectly rigid, ankylosed at the joints, and drawn up at an angle. The band which you see between the knees is placed there in order to prevent sores from forming by pressure. You see the same contracted condition in the hand. You remember that I said that this form of rheumatism commences in the larger joints, involving secondarily the smaller joints; that this is a hopeless form of rheumatism from the commencement; that patients of this class go on from bad to worse. Each time that they have an acute or a subacute attack they are left in a worse condition than they were at the former attack, until they become drawn out of shape, as this woman is, and are put in a position in which they have to be cared for either by friends or in hospitals. I know of no treatment that has any power even to arrest the progress of the disease. I know of nothing that gives them even temporary relief. When I am called to a case like this in private practice, I simply make the diagnosis and give the prognosis, and say to the friends of the patient, "I am powerless to relieve." It is said by writers that the afflicted go to certain springs in carriages, and, after partaking of the waters for a longer or shorter period, walk away. But such relief, so far as I have seen it, is only for a short time: they are very soon back again. Other than the deformity, this woman's general health is pretty good. Such cases generally have good bodily health; intellect is perfectly clear; they suffer more or less pain, and, as a rule, they become opium-eaters, for which I don't blame them!

Case II.—This young woman, aged 23 years, states that she is always sick, and that seven years ago she was confined to bed with throwing off of blood. *Q.* (to patient)—Do you remember how that throwing off of blood occurred? *A.*—I coughed it off. *Q.*—Did you cough before the blood made its appearance? *A.*—Yes. *Q.*—How long? *A.*—Soon after I had an attack of the smallpox. *Q.*—When did you have the smallpox? *A.*—When I was six years old. *Q.*—How many hemorrhages have you had? *A.*—A good many. *Q.*—A dozen or two each year? *A.*—Yes; I cannot remember how many a year. *Q.*—How much is the greatest in amount which you ever spat up? *A.*—A basinful. *Q.*—What was the cause of the hemorrhage?—what brought it on? *A.*—Pain in the left side. I never lost much flesh before, but this time I have. I

began to lose flesh before I came in here. I have been in here three months. *Q.* (to the *interne*)—How many hemorrhages has she had since she came in the hospital? *A.*—So many that I don't remember: it is a clear hemorrhage; there are streaks of blood mixed with the mucus. The last hemorrhage was three or four days ago. She is unwell regularly every month; never had any trouble.

Now let me tell you (observed the professor) that nine cases out of ten of hæmoptysis which you meet with come from the bronchial mucous membrane. It does not come from the lung-substance so often as one may imagine. Now, there are two different conditions of bronchial hemorrhage. What are they? 1, distention of the capillaries of the bronchial mucous membrane; 2, weakness of the walls of these capillaries. In nine cases out of ten this bronchial hemorrhage is due to an hereditary or acquired weakness of the capillary blood-vessels of the mucous membrane of the bronchial tubes. In a large proportion of these cases, very fortunately, the patient seldom or never dies. Many persons may have perhaps forty or fifty hemorrhages before the age of twenty-four or twenty-five, then they cease, and the person may go on and live to an old age. Now, in these cases there is almost always an hereditary tendency to bronchial hemorrhage. I will ask this girl the question whether any of her family have bled like her. *A.*—Yes, on my father's side. *Q.*—Did your father have hemorrhage? *A.*—Yes.

You will find always that a certain proportion of hemorrhages occur as a result of acquired weakness of the capillaries. For instance, here is a patient developing a phthisical condition, and that condition is marked by hemorrhage, and these hemorrhages are due to weakness in the capillary vessels. That is a point I insist upon very much. You say it is a very bad sign for a man to have hemorrhage: it is a sign that he will probably develop phthisis. Now, he may or he may not; it depends upon how he manages himself. If his hemorrhage occurs after exercise, he is not so badly off as when it occurs without exercise. A man lifts to excess, and immediately after has a bronchial hemorrhage, which lasts him for some time, and he gets well and never has another. Whether hemorrhage occurs in connection with the external manifestations of phthisis or not (the person may not present the appearances of phthisis; they occur in persons sometimes in the full condition of health), it indicates that it is important that the whole nutrition of the individual should be changed. The whole habit of life must be changed in order that the nutrition may be increased, so that a repetition of hemorrhage may not take place.

Q. (to the students)—Is there any particular danger from bronchial hemorrhage? I mean any immediate danger? *A.* (by the students)—No. You may tell the patient (said the professor) positively that he will not die from bronchial hemorrhage unless the shock to the system is great. He will get better from the hemorrhage; but at the same time it tells you positively that the man is in danger from the development of phthisis. He may not, however, develop phthisis from this single hemorrhage. *Q.*—What, then, is the danger? *A.*—He may die from anæmia. *Q.*—Yes? *A.*—You may have inflammation of the lungs. *Dr. L.*—I don't think there is much danger from that; but you may have an excited condition of the bronchial tubes,—bronchitis. A condition of hyperæmia of the bronchiæ may have preceded the hemorrhage; a bronchitis may follow immediately after the occurrence of the hemorrhage. When the hemorrhage comes on under these circumstances, it is much more dangerous than without exposure.

Now the question occurs, What means would you apply? *A.*—Apply styptics. *Dr. L.*—Yes, styptics, rest, and nutrition. They even recommend ice to be applied

to the chest. If a man catches a hemorrhage in Germany, he will be packed in ice as sure as fate! And that they will develop broncho-pneumonia is about as certain as that the patient is packed in ice. Then these hemorrhages are not immediately dangerous; and the most important element in the treatment, so far as controlling the hemorrhage is concerned, is—what? Keep still; rest,—that is the whole thing. Put the patient to bed, and let him lie there. You need not give styptics; you need not put him in ice. If you keep him still, and if the family and friends do not talk to him and excite him, he may get better. The capillaries are in the same condition as the lungs when ruptured. Rest, then, is the principal thing; nutrition may be added afterwards, and that is about all. But suppose he has a cough, and the blood follows: give opium in quantity sufficient to quiet the cough if he does not remain quiet without it. Is there anything else that you can do? *A.*—That is enough. *Dr. L.*—Yes, that is enough; wait. He will get along ten times better than if you throw into the stomach a dozen styptics. These are points which I wish to impress upon you: they are practical. There is more harm than a little done by the bad management of bronchial hemorrhage, and frequently the bad management is a cause of the development of phthisis.

You may have bronchial hemorrhage from other causes than exercise. A person goes up in a high latitude. If this class should go up into a high latitude, about one-third of the number would have bronchial hemorrhage simply from atmospheric changes. Those persons have a greater weakness of the capillary vessels than others, yet they may never develop phthisis.

Again, certain irritations will give rise to bronchial hemorrhages, like the irritation of gases or dust. A man has a cavity in his lungs. He is never free from danger of profuse hemorrhage when he coughs violently. Under these circumstances, hemorrhage is always dangerous. The cavity in the lungs increases; and the walls of the vessels of considerable size become involved in the ulceration. When hemorrhage occurs in connection with a cavity, it shows that the vessels are in a gangrenous condition. It is not the ordinary phthisical process, but a gangrenous condition. In this condition, the danger is that the patient will bleed so much that he will die from the loss of blood.

This woman has phthisis developed on the left apex; has had hemorrhage for seven years, without any phthisical development until within the last year or two.

W.

TRANSLATIONS.

INVESTIGATIONS ON THE INTESTINAL JUICE.—M. Leven communicated to the Société de Biologie, at a recent sitting, the results of his studies upon the intestinal juice.

This is not, as has been believed by many authors, an alkaline liquid. M. Leven has, on the contrary, always found it acid; when, as was done by M. Moreau, the intestinal juice is collected in an isolated pouch of which the nerves have been cut, a liquid is produced which is derived from the vessels, and which is not the true succus entericus.

The acidity of the intestinal juice is not produced, as Blondlot and Lehmann have supposed, by the formation of acids derived from saccharine and starchy matters.

M. Leven demonstrates this by his experiments upon dogs. When a dog is given seventy-five grains of sugar, absorption is complete in five minutes; the sugar cannot in that time become decomposed in order to produce acidity.

If a dog is given two and a half ounces of starch, sugar is found at the end of five hours in the intestines and in the blood; but the intestinal liquid remains neutral, since the sugar and the starch are not the cause of acidity. Finally, the intestinal juice is acid when it is removed from the intestine, and an infusion of intestine in tepid water gives an acid liquid.

An observation of Busch, who nourished a woman suffering from fistula of the small intestine by passing the food into the lower portion, is a proof of the digestive activity of the intestinal juice. This proceeds from the glands of Lieberkühn, the glands of Brunner, and perhaps from those of Peyer. In every case the intestinal juice may take the place of the gastric and the pancreatic juices, or at least furnish phenomena of digestion similar to those produced by the latter.

A. V. H.

VEGETATIONS OF THE VULVA.—Dr. Dubrueil has frequently had occasion at the Hôpital de Lourcine to combat vegetations of the vulva. This affection is quite rare in civil practice. It has nothing of a specific nature about it, since it may be met with among virgins, or may be brought about by gestation.

In the latter case no treatment is of use, at least until the termination of pregnancy. In other cases it is necessary to interfere, since the progressive increase in the size of these morbid productions is indefinite.

When called to a case in good time, while the vegetations are but little developed, cauterization with chloride of antimony or the acid nitrate of mercury, or excision followed by cauterization of the wounds with nitrate of silver, may be successfully employed.

It is otherwise, however, if the disease has progressed for a long time. In this case one is confronted by enormous fungosities, the pedicle of which is often difficult to make out. By what means shall they be attacked? The disease is too wide-spread for caustics to be thought of. The use of the *écraseur* may give rise to accidents. It often gives good results in the anal regions, since there the skin is adherent to the subjacent parts. About the vulva, where the skin is more mobile, the risk is run either of including a part of the labium majus in the grasp of the *écraseur*, or of allowing some of the vegetations to escape. Cutting-instruments may occasion hemorrhage difficult to suppress.

The galvano-caustic knife possesses, at least to a certain degree, the same inconveniences as the *écraseur*. This instrument cuts badly; the operator in using it is obliged to exert a certain degree of pressure on the tissues which he wishes to divide, and if this pressure is not very exactly adjusted there is danger of going too deeply or of leaving some of the morbid tissue behind. M. Dubrueil seeks to avoid all these inconveniences by combining the action of the cutting-instrument with that of the galvano-cautery, reducing the latter to the place of a hæmostatic. He snips off the vegetations with scissors, either by a single cut at their base, or by careful progressive movements of this instrument, if there is any doubt as to the limits of the disease.

Arriving at the tissues of the labium majus, he brings the galvano-cautery to the surface of the wound, and by this means controls the hemorrhage without entirely arresting it.

By this operation the patient is relieved at a single sitting; or, if small portions of the vegetations have escaped, a slight cauterization suffices to bring about a cure. It is well to follow the operation by dressings wet with a solution of perchloride of iron, or even of a tampon of charpie soaked in this liquid and allowed to remain in contact with the tissues for half an hour. It is true that these dressings are painful, but they are very efficacious in preventing relapses.—*L'Abeille Méd.*, Oct. 19, 1874.

A. V. H.

INFLUENCE OF TEA AND COFFEE ON THE EXCRETION OF UREA.—Brown-Séquard's *Archives*, July and September, 1874, contains a communication by Dr. E. Roux, comprising the results of a number of experiments performed on himself. His object was to ascertain the influence exercised upon the excretion of urea by the use of tea and coffee. His conclusions are as follows:

1. The quantities of urea, uric acid, chlorine, and phosphoric acid, excreted in twenty-four hours with the urine, are quite constant under the same conditions of regimen and alimentation.

2. The relation of urea to chlorine is constant when the quantity of urine eliminated is restricted within certain limits.

3. The ingestion of a large quantity of water does not augment the amount of urea, uric acid, or phosphoric acid excreted in twenty-four hours.

4. Acidity is notably diminished by the ingestion of large quantities of water.

5. The amount of chlorine eliminated in twenty-four hours is in proportion to the urine passed, and consequently to the fluids ingested.

6. In a person unaccustomed to the use of coffee, ingestion of this article augments all the solid matters of the urine.

7. This augmentation affects in particular the urea and chlorine. The relative proportion of chlorine to urea remains unchanged.

8. If coffee is used continuously, a certain toleration for it is established, its effects being less marked, and the excretion of urea and of chlorine becoming normal.

9. These conclusions are applicable as well to tea; only in the case of ingestion of tea the effects are less marked and more temporary, probably because the doses are smaller.

A. V. H.

THERAPEUTIC NOTES.

SUPPOSITORIES OF CHLORAL.—

R Chloral., ℥iiss;
Ol. theobromæ, ℥iiss;
Cera alb., ℥vss.—M.

Ft. suppositor. No. vi.

R Ol. theobromæ, ℥v;
Cera alb., ℥iiss;
Glycerinæ, ℥iv;
Chloral., ℥iiss.—M.

Div. in suppositor. No. vi.

The chloral should be dissolved in the glycerin at a gentle heat, and the cacao butter and wax added subsequently.

These suppositories of chloral are recommended by Dr. Const. Paul in cancer of the uterus. His formula is—cacao butter 11 grammes, white wax 7 grammes, and chloral hydrate 6 grammes, to be divided into six suppositories.

ANTI-GASTRALGIC MIXTURE.—

R Tinct. castor., ℥ii;
Tinct. opii, ℥xxx;
Tinct. menth. pip., ℥xv.—M.

Sig.—Eight to ten drops from hour to hour, in a tablespoonful of sweetened water. Useful in the pains of cardialgia, also in flatulence, and in pain in the intestines.—*Dr. De Savignac, Gaz. Méd. de Paris*, September 5, 1874.

COD-LIVER OIL.—M. Guichard states that for many persons cod-liver oil can be sufficiently disguised by breaking up sardines in it. The person should first be taught to like sardines, then the oil of sardines, and then it is but a short step to cod-liver oil with sardines crumbled in it.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

PRIMITIVE SURGERY.

ACCORDING to a paper read by Dr. Prunières before the recent Prehistoric Congress at Stockholm, trephining was frequently practised during the prehistoric Stone Age. It is stated that the operating surgeons of that date, working with flint implements, scraped the bone, layer by layer, until the dura mater was exposed. Skulls both of children and adults, with the orifices in some instances partially cicatrized, have been found in abundance. The crania have been submitted to M. Broca, and we suppose there is no room for doubt as to the fact that the trephining was in many instances performed during life, although skulls were also discovered from which the circular pieces had apparently been removed after death. It has likewise been observed that the fragments of bone have been replaced in the skull before interment, apparently with the intent that the person should appear in the next world in his entirety.

M. Prunières is of the opinion that the operation was practised for medical purposes, to give exit to a real or imaginary disease, and also that insane persons and epileptics, the friends of the gods of the old beliefs, were especially the subjects of it, and that the pieces of removed bone were used as charms and amulets. Both M. Broca and M. Prunières think that they see in this practice the most ancient material proof of belief in another world, and that therefore even the primal man of the Stone Age was a religious animal.

AMERICAN SODA.—Five million nine hundred thousand dollars' worth of soda, it is stated, are yearly imported into the United States for use in the arts. Six hundred miles west of Omaha, and about forty miles north of the line of the Union Pacific Railroad, there is said to be an inexhaustible supply of the carbonate, in a much purer form than the crude imported ash. In one place there is a surface deposit many acres in extent, and six feet deep, whilst alkaline lakes and smaller deposits everywhere abound. It is stated that when the branch railroad is constructed to the deposit, the material can be placed in New York at about three-fifths the cost of the foreign article.

THE LONDON WOMEN'S COLLEGE.—The London Council has given the following evasive answer to Dr. Anstie's letter asking for recognition:

"That whilst they take no objection to the list of names submitted to them in the letter of the late Dr. Anstie as teachers in the proposed school, they are not prepared to imply a readiness to recognize a school which is incomplete and respecting which they have so little information."

LEADING ARTICLES.

THE PRESENT STATE OF TRANSFUSION.

II.

BEFORE going on to speak of animal transfusion, we may allude to the diversity of practice which obtains in relation to the use of arterial or venous blood. All possible permutations have been attempted; blood has been transferred from vein to vein, from artery to vein, and from artery to artery. Hüter, who proposed the latter method,* gives the following reasons in its favor: 1. The injected blood goes more slowly and regularly into the circulation than by venous transfusion. 2. If a bubble of air should remain in the syringe it would be absorbed in the blood-mass, while if a vein were injected the heart would be reached so much sooner that the danger would be greatly increased. We do not remember to have recently met with any discussion on this point. Most writers use one method or another without giving any reason therefor.

The recent revival of animal transfusion was inaugurated by Gesellius, of St. Petersburg, in 1873.† This investigator endeavored to disprove the generally accepted opinions: 1, that the blood of any given animal acts as a poison upon any other species or upon man; 2, that only defibrinated blood should be used for transfusion. Gesellius used the blood of dogs, lambs, and calves, and the transfusions were "immediate,"

* Deutsches Archiv für Klin. Med., Bd. xii. p. 1, 1871.

† Transfusion des Blutes. St. Petersburg and Leipsic.

silver canulæ being placed in the artery of the giver and the vein of the recipient and joined by a glass tube. In addition to the results of his own experiments, he adduced statistics to support his views, and combated vigorously Hûter's notion of arterial transfusion, maintaining that blood containing fibrin should be used, and that it should be transferred from the artery of the giver to the vein of the receiver.

The most striking portion of Gesellius's argument is that which relates to the advantages of animal blood for the practical use of transfusion. His work attracted immediate and general attention. Hasse, of Nordhausen,* followed with a series of experiments in the same direction, including cases of phthisis, chlorosis, cachexia, carcinoma, and uterine hemorrhage, in which he used immediate transfusion of lamb's blood. Hasse's success, particularly in phthisis, led him to assert that "in direct arterial transfusion with lamb's blood an essential aid has been discovered in the treatment of this affection."

More recently, Drs. Fidler and Birch-Hirschfeld† have investigated the utility of transfusion with lamb's blood; but their conclusions are far from being so favorable as those of Gesellius and Hasse. In fact, during a discussion upon the subject before the Dresden Association, these physicians declared that they had been unable to derive any benefit whatever in tuberculous cases from such transfusion. So far to the contrary, that in many of their cases the condition of the patient was much worse subsequent to the operation.

Meantime, the German medical press teems with accounts of transfusions with lamb's blood under every variety of circumstances. Thurn‡ gives cases of amputation, catalepsy, carcinoma uteri, poisoning by carbonic acid, post-partum hemorrhage, phthisis, etc., with varying results; Brugelmann,§ cases of anæmia, and of various lung-affections; and Klingelhofer,|| of amputation and chronic bronchitis. The results of these investigations are in the highest degree contradictory, but for the most part may be said to tend to an unfavorable conclusion.

Turning from these clinical researches to those of a physiological character, we find the recent investigations of Landois, of Greifswald, possessing a high scientific value.

This physiologist mixed the blood of various mammals together, and also mingled the former with the blood of the frog, observing by the aid of the microscope the effect produced upon the corpuscles.

The pure serum of one species was also mixed with the blood of others, so that any action upon the latter might be more accurately observed. It was found that the blood-current, or, more properly, the serum, of certain species, exercised a decidedly solvent action upon

the corpuscles of others. This action varied greatly in different cases, the corpuscles of some animals being much more resistant than those of other species. Disintegration of the corpuscles, however, invariably resulted sooner or later, followed by a precipitation of fibrin. The fibrinous precipitate being derived from the stromata of the blood-globules themselves, previous defibrination would seem a matter of indifference, since the débris thus resulting would in any case be likely to give rise to clots in the vessels. Dr. Landois suggests that in rapid transfusions, when considerable quantities of foreign blood have been thrown into the veins of an animal whose blood-corpuscles are easily soluble, dyspnœa, convulsions, asphyxia, or even death, may result.

He believes concerning the destination of the transfused blood that a certain quantity is assimilated, while another portion passes off with the excretions, particularly the urine. When the transfusion is performed slowly and only a small quantity injected, the amount which finds its way into the urine is much less, and it may be supposed that more blood is assimilated. As to any assumption on the part of the injected corpuscles of their own peculiar physiological functions, Dr. Landois thinks this hardly worth consideration. He admits, however, that experiments with the blood of identical or closely-allied species are wanting.

Looking at these investigations as representing recent advances in our knowledge of transfusion, the question may be regarded as in a very unsettled condition. Excepting Landois and a few others, the various experimenters seemed carried away by the clinical idea, without due regard for the very imperfect physiological basis upon which it rests. Transfusion is well enough when we know exactly with what fluids we are dealing and what their mutual interactions may be; but in the present state of our knowledge, or rather ignorance, this is certainly not the case.

But while the practitioner called upon suddenly to treat a case of exhaustion from hemorrhage cannot stop to debate the comparative solubility of blood-corpuscles or to decide upon the relative value of mediate and immediate methods, yet these and the other points involved should be decided for him by the clinician, whose labors, it seems to us, should be based on the results of the physiologist.

Among the many questions relating to transfusion which seem to call for an early and satisfactory solution, the following suggest themselves as of paramount importance:

1. As to the admixture of the blood of different individuals of the human species. Do the blood-globules of the giver assume their physiological functions in the blood-current of the recipient, or are they dissolved?

2. In the latter case, does the dissolved portion supply pabulum to the organism? Does it alter the physical properties of the blood-current (specific gravity, etc.), or does it change the chemical constitution of the vital fluid of the recipient?

3. Do the stromata of the injected corpuscles remain

* Tagesblatt der 46en Versammlung Deutscher Naturforscher. Wiesbaden, Nov. 7, 1873.

† Deutsches Archiv für Klin. Med.

‡ Berliner Klin. Wochenschrift, Aug. 10, 1874.

§ Ibid.

|| Ibid.

undissolved? and, if so, under what circumstances can the least formation of *débris* and fibrinous precipitation be attained?

4. If the injected blood acts merely in a mechanical manner, by changing the density of the recipient's blood, or chemically, in altering its reaction, etc., what effect would be produced by the substitution of injections of albuminous or saline solutions or artificial imitations of blood? Could not some artificial preparation be made use of which would produce the effect of blood while avoiding all danger from undissolved fibrin?

5. Any further investigations relative to transfusion with the blood of the lower animals should be preceded by experiments upon the comparative solubility of their blood-corpuscles in the blood-current of the human species. Such experiments might be based upon and complementary to the very scientific investigations of Landois.

The field of discovery here open is most promising, not only for the immediate gain to science, but for the ultimate results which may accrue to practical medicine when the operation of transfusion is placed upon a rational basis.

PROPOSED RECONSTRUCTION OF THE BRITISH ARMY MEDICAL DEPARTMENT.

THE altered system of war has naturally necessitated a reconstruction of armies in all their branches, but in none was this more imperative than in the medical department. More men were wounded in a single day during the Franco-Prussian war than in a year of the Peninsular campaign, and it is therefore a matter of pressing necessity that the best possible scheme of hospital organization should be at once devised and adopted.

In the old days, when wars were protracted, when the marching was slow, and months were passed in winter quarters, the badly-wounded cases were sent to the hospitals in the rear, while such as were able to be moved accompanied the army, and fared very well, except perhaps in a retreat or during a hurried advance.

The regimental hospital system then sufficed; but now probably even those officers who are most wedded to it would confess that, while it may meet the wants of soldiers in time of peace, it is totally inadequate to the wants of a modern army in active service, and that some method for forming an efficient and well-disciplined sanitary corps must be devised. The peculiar elasticity of our army organization, the extreme improbability of the United States being suddenly plunged into any war which should involve the employment of large land-armies, the general feverish desire to avoid national expense, and the wide-spread and not altogether foolish feeling that the "Yankee" will take care of himself in all emergencies, tend to prevent any rational consideration of the subject of army medical reform in this country. But in England it is different. Men are much

scarcer, and are probably more highly valued, in a military sense, there than with us. Certainly the country is liable almost at any time to be dragged into a general European war, and even to be called on to resist invasion. Army matters in England have therefore a vital interest for every one, and every branch of the service is looked after.

Accordingly, on the 1st of March, 1873, an army warrant appeared which removed medical officers from their regiments and placed them on a general staff list, thus breaking up old friendships and associations, and depriving them of their homes, and of the advantages of libraries, bands, etc., to which they had contributed. Many, too, had paid large sums for exchanges, which they lost, and, in place of being officers belonging to distinguished regiments, they found themselves without prestige or position, members of a medical staff corps, and liable to be sent to any part of the world at short notice. In compensation for these serious losses, nothing was granted except a change of title, by which an assistant-surgeon became a surgeon, and so on for the superior grades in the medical service.

The following reorganization has been proposed, as involving no expense to the country, restoring to the medical officers most of the regimental advantages which they have lost, and insuring the economy and unification which are needed for the reconstruction of the Department. The Army Medical and the Army Hospital Corps shall be amalgamated into a Royal Sanitary Corps, which shall take rank with the other scientific corps. The officers of this corps shall be permitted to wear the ordinary distinctions and badges of their rank on their uniforms, with such others as are special to the corps, but shall have no command, except over patients in hospitals, or over officers and men immediately attached to hospital establishments. Medical officers are to be completely separated from regiments, and when with them are to be attached as honorary members only, but for all duty purposes they are to be kept as long as possible with corps. When regiments are moved to new stations, their medical officer should accompany them, and after handing them over to the officers of the medical corps already there, who have had some experience of the diseases of the region, they should return to their former stations. Until experience has shown the method that is most appropriate to peace and war, the sick shall continue to be treated regimentally.

CORRESPONDENCE.

NEW YORK SOCIETIES.

NEW YORK, October 30, 1874.

AT a meeting of the New York Pathological Society, on the evening of October 28, Dr. Satterthwaite presented a tumor removed from a lady, aged 45, in the early part of the last summer. She was married twenty-three years ago, and has had three children. The first

child was an eight-months' child, which she nursed for three months, when it died.* She was, however, requested by her physician to keep up the flow of milk. She used for this purpose a breast-pump. This instrument gave her great pain, which increased; and soon after, she struck her breast against a door. She nursed two children after that, and noticed that this breast—the right one—was somewhat larger than the other. About ten months before the third child was born, there was a discharge from the nipple. Some fifteen or sixteen years ago she noticed small lumps in the breast, which had grown greater until the time the breast was removed. The tumor was removed, and there has been no evidence of a recurrence. A cut was made in the tumor, and the difficulty can be traced directly into the milk-tubes. This growth, entering into the milk-duct, shows granular structures.

Dr. Erskine Mason presented a *ruptured bladder* from a boy about 11 years of age, and gave the following description of the case:

"He entered Roosevelt Hospital on the 8th of July. Six days before admission, he said he was kicked by one of the boys while playing at school. It gave him little pain, but for some hours afterwards he was unable to pass water. Later in the afternoon he was able to pass his water frequently, and apparently without trouble. Forty-eight hours after that he passed no urine, when a physician was called, who introduced a catheter and relieved him. During all this time there was comparatively no pain whatever. On the 10th of July he was running about the yard of the hospital. He was about that time placed on a bed to be thoroughly examined. Pressure upon the abdomen above the pubis produced no pain. Examination per rectum produced no pain. The only thing he complained of was that he could not pass his water, which was drawn off twice a day. On the 12th of July his urine was noticed to be bloody and offensive. He then commenced to have some pain above the pubis. He was placed in bed, and the bladder washed out. On the 19th of July he passed a few drops of water through the urethra. Everything went on rather favorably, apparently. He complained at times, however, of having a little pain over the pubis, and he eventually had cystitis, the urine being at times turbid and offensive, and sometimes dark brown. On the 20th of July his bladder was washed out about four o'clock in the afternoon. At five o'clock that same afternoon he was noticed to be reeling about, and shortly after he passed into a semi-comatose condition. The pupils were non-responsive to light. He remained in this condition about half an hour. On the 25th of July I found him suffering with pain above the pubis, and the house-surgeon had some difficulty in passing the catheter. He found an obstruction at the neck of the bladder. I never before suspected that he had rupture of the bladder, but I suspected it at that time. I passed my finger into the rectum, and I found that it had sloughed away beneath the bladder, and a swelling passed all along the ramus of the ischium. I instantly had the patient etherized, and as soon as I entered the bladder, bloody

urine flowed out. The bladder was before very much distended; it now collapsed at once. On introducing my finger into the bladder, I found a condition of things that I never met with before. I felt something in the bladder; what it was I could not tell. It was like a soft tumor. That operation was done at five o'clock on the 25th of July. At nine o'clock that evening the bladder began to be distended again. The patient suffered much. He was unable to void a drop of urine. The house-surgeon introduced a catheter, and relieved him. This condition of things continued until the 26th. I then put the patient under ether again, and made another examination, passing my finger, and pushing something before it, when the urine immediately flowed freely. Still the catheter had to be used three or four times a day. On the 28th of July a large quantity of pus discharged itself from the wound, and the patient felt considerably relieved. From that time up to the period of his death the urine flowed freely from the wound.

"On the 8th of August he was taken with diarrhœa, and succumbed on the 11th. A few days before death, he had cough and other symptoms of pleurisy.

"The autopsy was made on the following day. There was recent effusion over the right kidney, and there was an infiltration of pus. The left kidney was normal. The vesical mucous membrane was covered with pus. There was a large rupture on the posterior walls of the bladder. One of the torn edges projected into the cavity of the bladder. The rupture was in front of the neck. Now the condition of things was understood, and this explained why the urine did not flow from the bladder, and also why it flowed while using Thompson's dilator. It will be seen that when the finger is passed into the bladder the flap or torn edge lies directly over the urethral opening.

"Some two years ago I had a patient with a rupture of the bladder, and at that time I looked up the literature of the subject, and found that one case, referred to by Dr. Peaslee, lived forty-two days. My case lived forty-one days. He kept around for eighteen days.

"I feel, Mr. President, that if I had made a rectal examination at the time the patient entered the hospital I probably would have detected the real nature of the disease. There was no symptom to cause one to make such an examination."

Dr. J. Lewis Smith presented the thoracic organs of an infant who died at the age of about five and a half months. Its principal symptom was a *wheezing respiration*; the temperature was normal; the respiration somewhat accelerated, nearly 40; pulse 90.

Diagnosis.—An *enlarged gland pressing upon the bronchial tubes*. The child died of diarrhœa. At the post-mortem the bronchial glands were enlarged and ulcerated. Tubercles scarcely visible in the lungs. When there is wheezing respiration, in the absence of pulmonary signs of disease in a child under two years of age, one of three things may be looked for: 1, a pharyngeal abscess; 2, a small abscess developed on

the mucous membrane of the larynx or trachea; 3, bronchial phthisis.

At a meeting of the Medico-Legal Society, held October 22, Prof. R. Ogden Doremus, M.D., delivered an address upon "The Duties of Members of the Medical and Legal Professions, Toxicologists, Pharmacutists, and County Officers, in Cases of Poisoning, and the Necessity for Proper Legislation on the Subject." He said it is a popular delusion that the stomach is the privileged and chosen organ for the reception of poison, and it is the organ submitted to the toxicologist for chemical test. But attention should be paid to the preservation of articles of diet and the various vessels used by or for the victim. When death has been caused by gas, unusual acuteness on the part of the chemist is required. The examination of the body of one killed by a volatile poison, such as hydrocyanic acid, ether, or chloroform, should be made only in the chemical laboratory; and, for his own part, he preferred that the intestines and not the stomach should be submitted to the tests.

Dr. Doremus closed by offering a resolution that a committee of five, consisting of two physicians, two lawyers, and one chemist, be appointed to consider the question as to what additional legislation should be secured in regard to poisoning and the sale of poisons; also as to the right of a coroner to engage the services of chemists and other experts when, in his discretion, the interests of the public demand their aid.

The resolution was passed unanimously, and the Society then went into election of officers for the ensuing year.

W.

REVIEWS AND BOOK NOTICES.

CLINICAL LECTURES ON DISEASES OF THE NERVOUS SYSTEM. By WILLIAM A. HAMMOND, M.D. Reported and edited by T. M. B. CROWELL, M.D. New York, D. Appleton & Co., 1874.

The judgment which is passed upon a book depends largely upon the standard in the judicial mind. If the present volume is to be taken simply as the expression of a course of ordinary clinical lectures to students, we say unhesitatingly that those lectures are mostly very good,—well considered, logically wrought out, and clearly expressed. If, however, the book claims to be more than this,—if it is meant to be one of those masterpieces of medical art that become classic, such as Trousseau's clinical lectures,—we express the conviction that it falls far below deserving such destiny. Very many of the cases have not been followed out, and do not afford the data for positive opinions. Some of the diagnoses seem to us to rest upon insufficient grounds, and we find very little that is strikingly novel, or that is even put in a strikingly original manner. The articles are unequal; some of them being much fresher than others. But the fault which, we suppose, will most affect the sale of the book is its incompleteness,—many nervous affections being scarcely touched upon, or altogether omitted. Notwithstanding these deficiencies, the practitioner who is not in possession of or acquainted with Dr. Hammond's general treatise, or some other standard authority, will find much

pleasant and instructive reading in the present volume.

THE BREATH, AND THE DISEASES WHICH GIVE IT A FETID ODOR. By JOHN W. HOWE, M.D. New York, D. Appleton & Co., 1874.

This little brochure contains about one hundred pages of large, wide-ledged type, yet affords space enough in which to say all that need be said upon the subject of which it treats. "Bad breath" is often a most unmitigated nuisance, not so much, it may be, to its owner as to his friends. To any one suffering from this affliction either in his own person or in that of his intimate acquaintances we can commend this volume as containing all that is known concerning the subject, set forth in a pleasant style. Along with a tooth-brush and a *carte blanche* at the dentist's, it would form a most suggestive and, it might be, invaluable Christmas-gift, —as a matter of course, appropriate only in certain cases.

SELECTIONS.

BROMIDE OF POTASSIUM IN HYPERTROPHY OF THE SPLEEN.

HYPERTROPHIES of the spleen are very frequent in Algeria in places where intermittent fevers prevail, and among the inhabitants of palustral regions in the more or less marshy plains of Chélif, of the Mitidja, Issers, etc. This organ often assumes considerable proportions, compresses the intestines, embarrasses the circulation, and determines serious accidents, sometimes death. Very often, too, this engorgement resists every form of medication known up to the present day, the most energetic, the most rational, even removal from the mephitic centre, change of country, etc.

The following is a treatment which has always given me the best results. Up to the present time, of thirty-eight observations I have not had a case of failure, so that the treatment is as efficient as simple.

The volume of the spleen does not augment only after the access of fever. There are hypertrophies of this organ in malarial localities which have never been preceded by the least febrile movement. In these cases the sulphate of quinia produces no effect whatever: it may even be injurious. On the other hand, it produces very excellent results when the augmentation of the spleen is not only recent but is also the consequence of intermittent fever. We may see these hypertrophies disappear without even being obliged to administer large doses of quinia; and if they do not thus disappear entirely, they end by yielding spontaneously to the efforts of nature and a pure air. But we are not always happy in being able definitely to cut down an intermittent fever at its start. The patient does not always take the necessary precautions to arrive at a certain and solid cure. Recurrences supervene, each one of which increases the splenic engorgement. In these cases we can rely no longer on febrifuges. We must have recourse to a medication *dégorgeante, résolutive*, which up to the present time has not given results as evident and positive as the means of which I am about to speak.

It occurs also that we may completely cut down an intermittent fever, and the engorgement of the spleen may not present the least diminution. These cases, rebellious to the sulphate of quinia, yield perfectly to this new medication.

Splenic intumescence may have different forms; sometimes it is enormous, hard, painful to pressure, even to touch, gives a sense of resistance, presents an

extraordinary diameter, reaches beyond the linea alba, crowds back and seriously compresses the intestines, pushes up the heart and left lung, simulating affections of these organs, with great interference with their functions, takes up the whole of the left hypochondrium and sometimes a great part of the pelvis, as I have remarked in an Italian working at the fabrication of vegetable hair in an insalubrious lodging on the banks of the Harrach.

The great obstinacy I have often experienced in causing these hypertrophies to disappear has always interested me exceedingly; their persistence in spite of the most rational treatment and that best observed has often discouraged patients.

A most felicitous circumstance furnished me the indications which constitute the object of this work.

M. A—, colonist and landed proprietor in the Mitidja, a very intelligent man and a close observer, had inhabited the plain for fifteen to twenty years, during which time he had often been attacked with intermittent fever which had exhausted his constitution. During the time I dwelt in this country, he had several relapses with cerebral accidents, very painful and very disturbing, with delirium, nervous agitations, etc. I had frequent occasion to examine him thoroughly during and between the attacks. The spleen was enormous, hard, greatly hypertrophied. I advised different kinds of treatment, which had often been tried before, but without any result whatever.

In the course of the last year he was seized with an accession of very violent nervous attacks. I then prescribed the bromide of potassium, three grammes (forty-five grains) daily, in one potion. I was very much surprised on the tenth day of this treatment to observe that the spleen was diminished one-half. The bromide of potassium was continued twenty-five days up to complete resolution of the spleen.

I hastened to repeat this experiment to verify the fact,—I had a great number of cases under observation, —and I always obtained the same happy results.

En résumé, we may secure complete resolution of intumescence of the spleen in different conditions, by the bromide of potassium in the dose of one gramme daily for fifteen or twenty days in an infusion of linden-blossoms, orange-leaves, etc. It is rarely necessary to prolong treatment beyond thirty days.

Here is a last observation, made quite recently :

An Arab of Turkish origin, in a very comfortable pecuniary condition, had an enormous belly, resistant, very painful in the left hypochondrium, the most pronounced anæmia, and all these conditions for six years. After a month of treatment by the bromide of potassium, he resumed his occupation. Six months have now passed, and the left hypochondrium has presented its normal aspect and state. There was no recurrence whatever. No one of the numerous varieties of treatment previously employed had given this result, although they had secured him temporary relief.

I close by remarking that by this medication in the same doses, hypertrophies of the liver yield just as readily, or at least are very much improved. I propose to speak of this subject in another paper.—*M. Dr. Ch. Bernard, médecin de colonisation at Bordj-Ménaiel, in Bulletin Gén. de Thérap.—The Clinic, September 15, 1874.*

GLEANINGS FROM OUR EXCHANGES.

DIAGNOSTIC POINTS BETWEEN CANCEROUS AND SYPHILITIC ULCERS (*The Medical Press and Circular, September 30, 1874*).—1. With the cancrroid, save by coincidence, there is absence of anterior syphilitic affec-

tions. 2. With the cancrroid, evolution is much slower in kind, and the ulceration is preceded by a rather long period, during which the lesion shows itself in the state of a dry tumor, hard, and not ulcerated. There is nothing like this in tertiary syphilides, which either ulcerate at once, originally (ulcerating form), or develop infiltrations (gummy form) which ulcerate in a relatively very rapid way. 3. In the condition of ulcer the cancer still has a hard, dry, elastic base, which shows that the ulcer is formed on a morbid tissue. Tertiary syphilitic affections at the most are ulcers, with a hard, engorged base; but this does not give the sensation of a tumor beneath the ulcerations, and has not in any case the hardness of the cancer. 4. The ulceration of the cancer is redder and more fungous than that of tertiary ulcers; it bleeds more easily; secretes an ichorous sanies more diffuent, more fetid. It is often surrounded and bordered by mammillary vegetations, like raspberries or cauliflowers, etc. 5. At a certain time the cancer has an influence on the glands, which become hard, voluminous, and may even ulcerate, bud forth, and vegetate. With syphilitic affections there is no affection of the glands, at least in the enormous majority of cases, and with the exception of inflammatory and strumous complications. 6. Whilst the specific treatment remains without any action on the cancer, it is rapidly active in tertiary symptoms. It is, then, here, as in so many other cases, to specific treatment that we should have recourse when the least doubt subsists as to the nature of the lesion.

TETANUS CAUSED BY THE SPONTANEOUS OPENING OF A PSOAS ABSCESS (*Irish Hospital Gazette, October 1, 1874*).—Mr. T. Agmon Vesey reports the case of a boy, æt. 17, who had suffered for some months from a large psoas abscess which had finally burst and discharged. On the following day he felt his throat sore, and experienced some stiffness of the neck, which gradually increased and caused difficulty in mastication. The next day his right leg became very stiff, with occasional darting pains, which afterwards ascended to the abdomen and became fixed at the lower end of the sternum. He then had his first tetanic spasm, after which his condition was as follows: Face pale, brows contracted, forehead corrugated, eyes fixed, prominent, and peering, nostrils dilated, risus sardonius fearfully marked, skin covered with perspiration, pulse feeble and rapid. The sternal pain became much aggravated before each tetanic seizure. He lingered for seven days, and then died asphyxiated. Atropia was given hypodermically, in doses increasing gradually from one-sixtieth to one-twenty-fifth of a grain every fourth hour. No unpleasant consequences were produced, but as the system came under the control of the remedy there was a remission of the tetanic state, an increase in the force of the heart's beat and in the amount of urine passed, together with a cessation of the profuse perspiration, which had before been constant. The system, however, at last refused to respond to the drug, and it was discontinued.

CEREBRAL ABSCESS (*Irish Hospital Gazette, October 1, 1874*).—Dr. J. W. Moore reports the case of a girl, æt. 24, who, when she came under observation, had been ill but two days. She was much prostrated, her pulse was weak and slow (80), her temperature high (101°·7), her tongue heavily furred, and her lips partially covered with an eruption of herpes, the vesicles being filled with an opaque, pus-like fluid. There was tenderness on pressure over the occipital region. These symptoms led to the diagnosis of epidemic cerebro-spinal meningitis, and the rapid supervention of hyperæsthesia of the back of the neck, with marked retraction of the head, seemed to justify that view of the case. Dilatation of the pupils occurred, greater in the right than in the left eye,—together with convergent stra-

bismus and conjunctivitis of the right eye. The patient died, comatose, within a week, and the post-mortem examination revealed a large abscess engaging most of the posterior part of the right hemisphere, and running down to the margin of the posterior lobe. The cavity of the right ventricle was distended with a whey-like, sero-purulent fluid. The third and the left ventricle also contained a quantity of the same fluid. The upper part of the spinal cord, the medulla oblongata, pons Varolii, and cerebellum were all quite healthy.

AMAUROSIS FOLLOWING FRACTURE OF THE NASAL BONES (*The Medical Press and Circular*, Sept. 23, 1874).—Dr. John W. Martin reports the case of a laborer, æt. 60, who received a blow from a stone, which inflicted a severe lacerated wound, involving the upper eyelid on the right side, and fractured the nasal portion of the superior maxilla, together with the palate, and, most probably, the lachrymal bones. It was followed by severe pain in the right orbit and temple, complete loss of sight on that side, and lachrymation, the tears escaping over the cheek. There were no symptoms of external inflammation. The inner canthus of the eye was displaced downwards and outwards. Examination with the ophthalmoscope revealed well-marked congestion of the retina as compared with that of the unaffected eye. Motions of both eyes normal. Bowels acting. General health good.

R Sol. hyd. bichloridi, ʒi
(Strength, gr. i to ʒi);
Tinct. aurantii ad ʒij.—M.

One teaspoonful to be taken three times a day, in a little water, after meals.

Strong tincture of iodine was applied to the temple.

The subsequent history was one of steady improvement and recovery of sight.

PERFORATION OF THE RECTUM (*British Medical Journal*, Sept. 26, 1874).—Dr. C. S. Jeaffreson reports the case of a girl, æt. 15, who accidentally jumped with some force upon a walking-stick, the end of which penetrated her anus, but was easily withdrawn. Symptoms of acute peritonitis occurred on the following day, and digital examination revealed a rent in the anterior wall of the rectum, which was large enough to admit the finger into the peritoneal cavity at the apex of the recto-vaginal pouch. The case terminated fatally at the end of the second day.

ARTERIO-VENOUS ANEURISM (*The Lancet*, October 10, 1874).—Mr. Timothy Holmes thinks that the study of the recorded cases of arterio-venous aneurism should lead us to derive from them the following inferences:

First. That the treatment must be directed to obliterate the orifice of communication between the artery and the vein. It is from this communication that all the secondary consequences of the affection seem to proceed; viz., varicosity of the veins, degeneration of the artery, œdema, pain, and loss of the functions of the limb. This communication may be obliterated in three ways:—1. By laying the sac open, and tying the artery above and below the wound. When this has been done, the surgeon may use his own judgment as to tying the vein also. 2. By tying the artery above and below outside the sac. 3. By compression applied to the venous orifice and to the artery above the tumor. This is best done simultaneously after Vanzetti's method. But cases have been successfully treated by first compressing the venous orifice until the latter has been obstructed by coagula; the arterio-venous is thus converted into a simple arterial aneurism, which is afterwards treated in the usual manner.

Secondly. All cases which have been dissected at a late stage of the disease prove that the artery becomes so attenuated and enlarged above the tumor that no

operative interference can then be successful. Hence the necessity for treating the disease decisively at first, and for abandoning operative interference if the case is not seen sufficiently early.

MISCELLANY.

ACCORDING to Képesy, the surgeon to the Austrian Polar expedition, chocolate, as a beverage, proved most valuable of all,—the preserved meat and vegetables in tins being also of the greatest service in sustaining the strength and spirits. Mental anxiety, however, caused by the hourly-apprehended crushing of the *Tegethoff* by the ice-fields in which it was imbedded, so far neutralized the virtues of the victualling that scurvy and affections of the lungs set in, and yielded only to the incessant bear-hunting in which the officers and crew wisely indulged to keep the faculties, moral as well as physical, occupied. The fresh bear's meat, as a change from the preserved, had also its advantages; but several of the crew succumbed,—one of them being the engineer, who died of consumption, and was buried between two basalt columns in the newly-discovered land.

Two of the foremost surgeons of Milan have recently been fined for not giving information concerning a duel which was attended with serious results. The plea of professional secrecy was brought forward, but the court refused to receive it.

THE number of medical students entered in London since October, 1873, is said to have been a little under one thousand. St. Bartholomew's heads the list with 109, and is followed by Guy's with 85.

AN extract for tanning leather is now prepared from *Polygonum amphibium*, which grows extensively in the West. The plant can be had in large quantities at two dollars per ton, and contains about twenty-two per cent. of tannic acid.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM NOVEMBER 3 TO NOVEMBER 9, 1874, INCLUSIVE.

CUYLER, JOHN, SURGEON.—Detailed as member of Army Retiring Board, to assemble in New York City on the 16th instant. S. O. 240, A. G. O., November 5, 1874.

HEAD, J. F., SURGEON.—So much of S. O. 229, c. s., A. G. O., as relieves Surgeon Head from duty in Department of Dakota, is revoked. S. O. 237, A. G. O., October 31, 1874.

MOORE, JOHN, SURGEON.—Detailed as member of Army Retiring Board, New York City. S. O. 240, c. s., A. G. O.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Colville, W. T. S. O. 149, c. s., Department of the Columbia.

NOTSON, W. M., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Cameron, Utah Territory. S. O. 162, Department of the Platte, October 30, 1874.

BARTHOLOP, J. H., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Camp Harney, Oregon. S. O. 149, Department of the Columbia, October 22, 1874.

DE HANNE, J. V., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Mackinac, Michigan. S. O. 220, Military Division of the Atlantic, November 6, 1874.

SATURDAY, NOVEMBER 21, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE USE OF DIGITALIS IN DISEASES OF THE HEART.

No. II.

Delivered at the Philadelphia Hospital

BY H. C. WOOD, JR., M.D.

Reported by Dr. JOHN GUITÉRAS.

AFTER a brief résumé of the previous lecture, Dr. Wood passed on to explain how digitalis does good in the individual valvular lesions. After briefly explaining the distribution of the cardiac cavities and the mechanism of the valves, he took up the consideration of the mitral.

There are only two possible conditions that can affect this valve: one is constriction, and the other insufficiency.

Suppose we consider, first, cases of mitral deficiency. As previously stated, when we administer digitalis we give the ventricle more time to fill up with blood and more force to propel it. But you will tell me that this excess of force is applied to one opening as much as to the other, to the leak as well as to the open mouth of the aorta. This is true; but you must remember that the leak is usually a comparatively small and irregular orifice, so that when the force of propulsion is increased, the resistance of friction increases much faster at the leak—*i.e.*, the small, irregular, partially obstructed opening—than at the large, smooth, aortic mouth; consequently, the greater the force of propulsion, the less blood proportionately is lost through the damaged valve, and the more blood proportionately is forced into the aorta.

In mitral stenosis or constriction, during diastole the ventricle only fills partially with blood; because the opening through which the blood comes is narrowed, and because the time allotted for the purpose is shortened rather than increased, owing to the irritated state and rapid action of the viscus. Now, digitalis lengthens this period of diastole, and if the orifice is narrowed by one-half the drug may give the ventricle double the time, so that it may fill up and be able to contract with increased force upon a good volume of blood. Instead of a hundred abortive contractions of an empty ventricle, there will be a less number, seventy, or sixty, or even fifty strong contractions of a ventricle full of blood; of course the gain is enormous.

It is unnecessary to follow out the same reasoning for the right auriculo-ventricular valves, because the physical conditions are identical, and because primary disease of the right side is a great rarity.

We will pass, then, to speak about the two conditions that may affect the aortic opening,—*viz.*, constriction and insufficiency. In aortic constriction we have no leakage, but a constant impediment to the flow of blood from the heart; an impediment

which impresses the ventricle chiefly during systole, stimulating it at such times enormously, and probably for this reason almost constantly giving rise to hypertrophy rather than dilatation. Because the hypertrophy is, in these cases, so often fully compensatory, or even excessive, digitalis is generally not indicated, and often has done harm; from this has arisen the notion that digitalis is a dangerous drug in aortic disease of the heart. This is a mistake; it really makes no difference which valve is diseased. The question simply is whether the hypertrophy is excessive, sufficient, or insufficient. There are cases of aortic obstruction in which the hypertrophy is deficient, and in these digitalis is indicated. In aortic regurgitation the leakage does not occur during the period of cardiac activity, but when the heart is at rest, and the blood is thrown back against the semilunar valves by the arterial contraction. Digitalis, by lengthening the diastole, may thus increase the trouble; but yet, even in these cases, when the left ventricle has been so overpowered that it cannot unload itself of the blood that pours in from the two openings, digitalis may give the muscle strength to overcome temporarily the trouble. It is evident, however, that in aortic regurgitation the drug must be used with especial caution.

In the use of digitalis, so far considered, the drug has been given with the idea of affording temporary relief. To show how temporary this relief may be, let me tell you that the case which I showed you at my last lecture is much worse, and that the drug no longer affords the man any relief. To show you how great this relief may be for an instant, even when the patient is *in articulo mortis*, let me read to you some notes furnished by my able resident, Dr. Berens, in regard to a case of mitral and tricuspid disease which recently died in this hospital. The fatal paroxysm, it should be stated, came on rather suddenly. Dr. Berens says,—

On my arrival in the wards, the patient was found sitting up, supported in a chair, completely unconscious, with cyanosed face, labored respiration, pulse weak, intermittent, irregular, and rapid to the last degree. He received immediately ten grains of carbonate of ammonium hypodermically, as he was unable to swallow. In a few moments he revived sufficiently to take some whisky. Pulse now was about 160, with its character unchanged. A hypodermic injection of digitalin, gr. $\frac{1}{2}$, was now given. No change being noticeable in twenty minutes, the dose was repeated. Fifteen minutes after this, the pulse began to alter, and in less than five minutes had fallen to 90, and was comparatively quite regular and strong; the respiration changed also, and the man recovered consciousness. After a short time, upon expressing the desire to lie down, he was permitted to return to bed, and soon after lapsed into what seemed a quiet sleep. About an hour after this, the pleural effusion seemed to overcome him; he started up panting and coughing, then fell back, and in less than half an hour expired, evidently killed by the lung-complication, as his heart retained its regularity to a great extent up to the last moment. At the post-mortem an extraordinary amount of valvular degeneration was revealed, there being extreme mitral and tricuspid stenosis and insufficiency. The lungs were œdematous, and the cavity of the thorax filled with serous effusion.

In the earlier stages of cardiac disease, digitalis helps in effecting what may be called a cure. It is a mistake to suppose that the existence of valvular disease necessarily dooms a patient to a short life, or to one of suffering, or even of decided invalidism. If the disease commences before the age of nineteen, it is very apt to terminate fatally before thirty; but if it develops after puberty, the victim may enjoy a comfortable life of many years' duration. I have long had under my care an old lady who was as a child dandled on the knees of General Washington, and who for years was a patient of Dr. Physick, but who yet, at eighty-five, enjoys comparatively good health, although from time immemorial she has suffered with very decided mitral insufficiency.

Nature cures valvular lesion, or rather protects itself against the ill effects of valvular lesion, by compensatory hypertrophy; and the rational aim of treatment is to aid nature in this, and, above all, to prevent that failure of cardiac strength that ends in cardiac dilatation. Digitalis will not only aid in averting dilatation, but will also aid very greatly in the production of hypertrophy.

Dilatation is, no doubt, partly owing to a gradual stretching of the heart-walls during diastole from over-repletion of the cavities; digitalis enables the heart to empty itself, so that there is much less cause for dilatation, and also, by toning the muscular fibres, gives them strength to resist the tendency. To explain the action of the drug in producing hypertrophy, we must refer to the cardiac circulation. The coronary arteries are given off at right angles from the aorta, so that there is little tendency for the blood, just squirting out from the heart as a solid stream not yet broken by contact with the arch of the aorta, to leave the wide-open track and pass into the small coronary arteries; besides, the mouths of these small vessels lie so close to the edges of the semilunar valve that these either close them entirely or else deflect the blood-current from them. More than this, during the systole, every vessel in the heart-wall is forcibly closed, precisely as the sinuses of the uterus are closed when you induce uterine contraction in post-partum hemorrhage. But when the recoil comes, the elasticity of the aorta drives back the blood towards the ventricles, shutting down the semilunar valves, and of necessity forcing the blood into the cardiac vessels. These are now relaxed, so that the vital current enters into every portion of the viscus. During the diastole, then, the arterial blood enters the heart; during the systole the venous blood is squeezed out of it, the muscle becoming so dry and so bloodless that in the lower animals it is often absolutely white.

It is readily seen that when, owing to valvular disease of the heart, the general circulation is failing, the cardiac circulation must suffer most seriously. Although a great number of imperfect cardiac contractions occur, yet a small amount of blood is thrown into the arterial system, making the reflex from the empty aorta a very feeble one. More than this, the action of the heart is so rapid, the diastole so short, that time is not allowed for

the arterial blood to enter and nourish the cardiac tissue; and, the systole being also so feeble and incomplete, the venous blood is not thoroughly expelled from the heart-walls; so that there is a diminution of the arterial supply, and an imperfect draining of the venous blood. The cardiac circulation is therefore doubly impaired, and imperfect blood-supply to an overworked organ means defective nutrition and rapid degeneration. Digitalis, by prolonging the diastole, gives time for the cardiac vessels to fill up; by increasing the power of the systole it empties the cardiac veins, and at the same time, by causing more blood to be thrown into the aorta, gives the arterial system more of the vital fluid to contract upon and to propel into the coronary arteries. The effect of the change wrought in the cardiac circulation by digitalis is probably tenfold that achieved in the general system; and therefore, by furnishing nutriment, the drug exerts a most powerful influence in favoring the production of hypertrophy. When the cardiac muscle has already undergone change, digitalis can effect but little: hence the importance of administering the drug with iron and other tonics in the early stages of heart-disease.

But little time can be devoted to-day to the question of the administration of digitalis. Probably the infusion is the best form. If there is much dropsy, the drug may be given in pill form, combined with squill, one grain of each, three times a day. Of the tincture you can give five, ten, fifteen, or twenty drops every four, three, or two hours. In all cases you increase the dose gradually until some effect is attained, but you must do this very carefully, as digitalis is eliminated very slowly from the system; and sometimes, when it has been taken for a long time, a sudden poisonous effect results. Its effects, indeed, are always slow to show themselves, and they also subside very slowly, so that the medicine should be at once withdrawn temporarily when a decided influence is apparent.

Some time ago there was a woman with hydrothorax in our wards who was taking ten or fifteen drops of the tincture three times a day. This was continued for many weeks without any decided effect. One Sunday the pulse was found to have fallen ten beats,—it was then 80. On Monday, the pulse being 70, the digitalis was discontinued. On Tuesday the pulse was 60; on Wednesday it was 50, and on Thursday it was 40. With rest and opium the patient recovered, but for a week afterwards her pulse never went above 50.

I do not want to impress you with the idea that digitalis is a dangerous drug. It has been given in doses of a half to one ounce, without any dangerous symptoms. The tincture, as you know, has been given in large doses—even an ounce—in the treatment of acute alcoholism, and the old school of therapists have been at their wits' end to know why it did not kill patients already suffering with the great nervous exhaustion of delirium tremens. They even suggested that the alcohol in the tincture counteracted the depressing action of the drug; but what are a few drops of alcohol to a man who is in the habit of taking over a pint a day? And how could

such small doses of the stimulant counteract the enormous dose of such a powerful sedative as digitalis has been supposed to be? Digitalis in these cases did not kill the patient, gentlemen, because it is not a cardiac sedative, but is a cardiac stimulant.

Do not, therefore, be afraid of digitalis in valvular heart-disease. Use it cautiously but boldly, use it freely but judiciously, and you will find that it deserves even a better title than that "of an opiate for the heart."

ORIGINAL COMMUNICATIONS.

FRACTURE OF THE FRONTAL AND TEMPORAL BONES SUCCESSFULLY TREATED.

BY JOHN FOOTE, M.D.,

Archibald, Pa.

Reported by J. V. SHOEMAKER, M.D.

WEDNESDAY, June 24, 1874, about 7 A.M., while James F., eleven years of age, was playing on the railroad-track, he was struck on the forehead by that part of the locomotive called "the pilot." The doctor was called a few minutes after the accident, and found a wound five inches in length, and about one inch above the superciliary arches of both orbits. The fracture was traced across the os frontis from one temporal bone to the other. The temporal bones themselves were also fractured their entire length. The skull was lifted up half an inch at the external wound. The bleeding was profuse, and portions of the brain were protruding through the entire length of the wound. The pulse was 88, and irregular; the pupils were natural, but consciousness was partially lost. The wound was washed by pouring water on it, which brought away about half an ounce of the brain-material. The external wound was then drawn together in its middle by a suture. Inserting the needle brought a sharp cry of pain from the patient. A sponge saturated with a weak solution of carbolic acid was then nicely packed in the open portion of the wound, and a bandage was applied so as to press the sponge lightly into the wound.

The patient asked for a drink of water, and tried to pull off the bandage. Pulse 88, irregular and full. On removing the bandage, the substance of the brain oozed out. The sponge, on examination, was found to be saturated with blood and brain-substance. Five grains of bromide of potassium and ten drops of tincture of digitalis were given every four hours. Vomiting set in, and about the same time the right eyelid became very much tumefied.

Thursday, 25th, 7 A.M.—Pulse 75, full, and irregular. The middle meningeal artery of the dura mater could be seen beating strongly on the right side. The patient rested well during the night; the vomiting had not recurred. On taking off the bandage, more brain-matter was lost, and the sponge was saturated with blood. During the night and day his breathing was difficult. The face became very much swollen, and the right eye was completely closed. Warm milk and toast-water were ordered for him, and the bromide of potassium and digitalis were continued.

Friday, 26th, 7 A.M.—Pulse 76, and regular; patient had a good night's rest. The pupils were natural; consciousness returned for the first time; he was able to recognize those around him, but could not tell how he had been injured. Tongue slightly coated. Dr. R.

Squires, of Scranton, met the doctor in consultation, and advised the continuation of the treatment.

Saturday, 27th, 8 A.M.—Pulse 76, and regular; passed a comfortable and quiet night; on awakening, complained of feeling hungry. He took the substance prepared, and a cup of tea. Absence of pain. The right eye remained closed, and the brain-substance continued to come away in small pieces, but the oozing of blood had ceased; tumefaction had extended to the left side of the face. The bowels were freely moved by citrate of magnesium. The sponge was removed from the wound, which was dressed with lint saturated with a weak solution of carbolic acid.

Sunday, 28th, 8 A.M.—Pulse 80; patient sitting up, taking milk and toast freely. The brain-substance ceased to come away, and that in the wound was of an ashy-gray and light-brown appearance.

Monday, 29th.—Suppuration set in; the wound looked yellow, and granulations were beginning at the left corner. On removing the sutures, adhesive strips were applied over the middle of the wound, and it was again dressed with lint saturated with a solution of carbolic acid. As he became very restless and feverish, full doses of bromide of potassium and digitalis were given. The quieting effect of the bromide could be seen on the branch of the middle meningeal artery of the dura mater half an hour after administering it. Four hours passed before the digitalis began to act and reduced the frequency of the pulse. By means of the bromide and digitalis the pulse was kept below 90. The doses had to be regulated according to the determination of the blood to the brain. The citrate of magnesium was given, and soon caused a free action of the bowels.

Wednesday, July 1.—Pulse 88, full and irregular; tongue clean; bowels torpid; refused to take nourishment. The pupils were dilated; was not able to see with the right eye, and complained of cramps in the right leg. The wound suppurated freely, and was granulating rapidly.

Thursday, July 2.—Much better and brighter. Paralysis of the left side of the face well marked; also loss of vision in the right eye. Wound granulating.

Friday, July 3.—Pulse 80, and full; loose piece of the frontal bone was removed; on the right side there is a large piece of the brain protruding half an inch above the skin, covered with healthy pus.

Thursday, July 9.—The wound has continued to heal. Loose pieces of bone, from one-quarter to one-half and even three-quarters of an inch long, and of different breadths and thicknesses, have been frequently removed. He has regained the sight of the right eye, and the paralysis of the face is gradually disappearing.

Seven weeks from the time of the injury the wound was entirely healed, and he went to work in the coal-mines, perfectly recovered in body and mind.

A CASE OF EARLY MATERNITY (*The Medical Record*, October 15, 1874).—Dr. E. A. Goodridge reports the case of a colored girl who began menstruating shortly after her eleventh birthday, and continued to do so regularly until the month previous to her twelfth birthday, when conception took place. Gestation was completed without the occurrence of any special functional derangement. The head presented in the left occipito-iliac position; labor lasted seven and a half hours. The infant was a female, weighing seven pounds. There was a copious lacteal secretion on the third day, after which the mother continued to supply sufficient nourishment for the sustenance of her child. The mother's age at the time of delivery was twelve years, eight months, and twenty-five days.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS.

FEMORAL ANEURISM.—LIGATION OF EXTERNAL ILIAC.

JAMES L., æt. 34; occupation, that of a warper in a cloth-manufactory.

Gentlemen,—The case which now presents itself for consideration is one of much interest, both from its gravity and comparatively infrequent occurrence at this period of life. This affection is more common in advanced age, and in persons whose employment subjects the lower extremities to severe muscular exertion, producing sudden strain upon the vessels.

This man, in the prime of life, has always enjoyed very good health, and his occupation is one not requiring a great amount of muscular strain or activity. About two months ago, he observed a tumor situated in the groin at its anterior aspect, two inches below Poupart's ligament. He had never received an injury in this locality. The swelling gave him no pain, and produced so slight inconvenience that little attention was paid it, till within the last month it has increased so much that he has now applied for relief. Latterly, he has been losing flesh. The heart's action is weak, and the pulse 68. You observe, in the position before indicated, a tumor, pulsating synchronously with the heart's contraction. Auscultating the tumor, I hear an aneurismal blowing sound. Placing my fingers just below Poupart's ligament, in the line of the femoral artery, and making firm compression, the pulsatory movement and blowing sound are completely arrested; and, on pressure, the tumor almost completely disappears. On the other hand, making compression below the swelling, the tumor is notably enlarged.

There is no difficulty in diagnosing this tumor, it being manifestly an aneurism of the femoral artery. Had we seen the case at an earlier period, the inquiry would arise if it were not a psoas abscess pointing in this locality, a bursa, or an enlarged lymphatic gland, which, probably receiving an impulse from the artery, caused the swelling to simulate aneurism. But the history of the case, the fact that the tumor pulsed from the moment of its development, and a careful examination, promptly set aside the possible existence of any such affections.

You are aware that an aneurism is a tumor occupied by blood, and communicating with an artery either partly or entirely deprived of its integrity.

Aneurisms are distinguished, in reference to the causes producing them, into two kinds,—viz., traumatic and spontaneous aneurism. They are also designated as true and false; the former term being applied to that species of aneurism in which one or more of the arterial walls form a part of the tumor; the latter, on the contrary, one in which all the tunics of the vessel have given way, and the aneurismal sac is formed by the condensed cellular tissue.

Spontaneous aneurism is of more frequent occurrence than the traumatic; it is more common in some arteries than in others, and more males than females are attacked by it. The artery which suffers most frequently is the aorta, throughout its whole extent; and the next in point of liability are the popliteal artery, the femoral, common carotid, subclavian, innominate, axillary, and external iliac. Spontaneous aneurism results from the earthy or atheromatous degeneration of the arteries rendering their walls preternaturally brittle, causing them to yield more readily to the impulse of the blood or severe muscular action.

The case before us is doubtless a true aneurism of the

sacciform variety, the middle and internal coats having been ruptured, and the sac formed by the dilated external tunic. The aneurismal thrill is produced by the passage of blood from and to the artery, through the orifice communicating between the sac and vessel; and the thrill, which is here not very marked, is due to the comparatively large size of the aperture.

The effect and termination of aneurism pursuing its course without the intervention of art are interesting and remarkable. The effects produced upon the surrounding parts are essentially mechanical in character, varying with the size and situation of the tumor. The functional disturbance is also in proportion to the amount and importance of the structure involved. It is not less remarkable than gratifying that, although the prognosis of aneurism is so extremely unfavorable, nevertheless a spontaneous cure is occasionally effected; thus, cases bidding defiance alike to medical and surgical skill eventuate in complete recovery. This, however, is unfortunately the exception, and not the law, the aneurism increasing progressively until it finally bursts, and terminates the life of the individual.

The treatment of external aneurisms, or those properly belonging to the domain of surgery, dates back to the time of Celsus. But the lapse of time from that period to the present day has marked great and necessary modifications in the treatment of this class of maladies. The method of treatment at that time consisted in laying open the tumor, turning out its contents, and applying the hot iron to the extremities of the severed artery, to seal up its mouth. From this treatment almost every patient perished from secondary hemorrhage.

Subsequent to this, we find other operations not much more fortunate in their results, until Mr. John Hunter first introduced the operation of ligating the artery at the cardiac side of the tumor, the results of which were much more gratifying than any of the previously employed measures. This operation was effected by casting a ligature about the vessel sufficiently tight to completely occlude its calibre, and at a distance on the cardiac side of the tumor to reach beyond the portions involved in the degeneration. After this, a teacher in the old School of Surgery, at Paris, suggested ligation on the distal side of the tumor in cases in which, on account of the position of the aneurism, Hunter's operation was impracticable.

Among other methods which have been employed and are deserving of consideration, are forced flexion and compression. The former mode of treatment has been attended with very good results, and in one case in which I employed it it was completely successful. The latter method was not very successful as first employed, but, having undergone some modifications by Dublin surgeons, compression by mechanical appliances now ranks among our resources of treatment. Digital compression, first proposed by a surgeon at Padua, is a mode of treatment which has not received as much attention as it deserves. Statistics bear very favorable records from the employment of digital compression, and some time ago complete solidification of the contents of the sac of a large aneurism of the upper third of the femoral artery was effected in forty-six hours by digital compression alone. In this case I propose to adopt either ligation by Hunter's method, or forced flexion. This consideration will be reserved until the next clinic, when the decision will be acted upon.

Gentlemen,—Since this patient was last before us, to arrive at the best mode of procedure for his relief forced flexion was temporarily resorted to, but it was productive of so much pain that ligation was considered to be the better method, and to-day I purpose performing the operation before you. The high situa-

tion of the aneurism will render it necessary to ligate the external iliac artery, in order to accomplish the desired end.

This operation consists in making a curvilinear incision, with the convexity downward and outward, commencing from an inch to an inch and a half above Poupart's ligament, just outside the external abdominal ring, carrying it upwards on a level with the anterior superior spinous process of the ilium, and about two inches to its inner side. The first cut extends through skin and superficial fascia; and if any small superficial arteries are severed, they are secured before any further procedure.

By this incision the aponeurosis of the external oblique muscle is laid bare, and is divided upon the grooved director. Beneath this in order come the internal oblique and transverse muscles, which are divided, and finally the transverse fascia is exposed, being recognizable by its whitish opaque appearance. A small hole is cautiously made in this membrane, which is slit open to the extent of the other incisions. The next procedure, and one of the most delicate, is to separate the peritoneum from its attachment in the iliac fossa. This having been accomplished, the iliac artery will be found pulsating at the bottom of the wound, with the iliac vein behind it above, and on the inside below; while on its outer side, and on a somewhat lower plane, lies the anterior femoral nerve. Care must be taken not to include either of those structures in the ligature. The sheath of the artery being cautiously penetrated, the aneurism-needle, armed with a ligature, is gradually passed around the vessel from within outwards, and firmly tied. The wound is now to be brought together, and this should be done by introducing the needle down close to the peritoneum, or, what is better, by bringing the different structures together and tacking them separately; this precaution being taken to insure union between the parts, and thus obviate the liability to hernia when the patient begins to walk about. The after-treatment requires the patient to be put carefully in bed and placed in such a position as to relax the parts, and the limb from which the supply of blood has been cut off to be kept warm.

An anodyne should be given, and the bowels locked up for the space of several days, and when moved only the mildest measures must be adopted. The patient is now under the influence of an anæsthetic, and I shall operate in the manner just described. The bowels were emptied of their contents just previous to coming into the room, which adds to the facility and safety of the operation. I have divided successively the superimposed structures, and detached the peritoneum from its connections, and the artery is plainly felt at the bottom of the wound. A silk ligature, well waxed, is now passed around the vessel and tied with sufficient firmness; and you observe that the tumor immediately ceases its pulsations. The integumental and muscular structures are accurately approximated by sutures. An anodyne will be given, the bowels locked up, the temperature of the apartment regulated, and light diet with cooling drinks ordered; the supply of blood being cut off by the external iliac, the collateral circulation will be established mainly through the anastomosing branches of the gluteal, sciatic, obturator, and pudic arteries, with the circumflex and deep femoral branches.

It is four days since ligation of the external iliac was performed, and the patient is doing well in all respects. There has been but slight change in temperature, no shock to the system, he has slept well, appetite is good, and the pulse from seventy-three to seventy-four. The bowels are still locked up, and will be kept so for some time yet. The dressing has been changed, simply applying lint, saturated with olive-oil. There is no suppu-

ration, and the wound has united by adhesive inflammation. The ligature will probably come away in ten to twelve days, dependent upon circumstances. He has been taking gr. ii quiniæ, gtt. xx tincturæ ferri chloridi, four times daily, and gr. iv opii once a day, with tincturæ aconiti radice, gtt. iv four times a day.

Three weeks have elapsed since the operation, and the patient continues to progress favorably. The bowels were not moved for fourteen days, from which, however, he did not suffer in the least. He has now one movement daily. The wound is all healed, except the part embraced by the ligature, which is still retained, no traction having been made upon it.

It has been five weeks since the operation. The ligature came away this morning. In the past fortnight there was some swelling and elevation of temperature in the tumor, and fears were entertained that the clot was undergoing softening. The aspirator was introduced to draw off any fluid that might be present, but little was found. After this, a small opening appeared, from which was discharged for a few days a small amount of grumous blood admixed with pus.

The danger is now past, although for a time secondary hemorrhage was feared. The ligature, detached by ulcerative absorption, came away itself, gentle traction having been made. He is now taking no medicine.

Five weeks and four days have elapsed since the operation, and to-day the patient will be sent home. The tumor has completely disappeared. The wound in the abdomen is healed, except a small spot of granulation at its most dependent portion. He must remain quiet for ten days after his removal home, when he may commence to walk about.

ST. MARY'S HOSPITAL.

SERVICE OF DR. J. EWING MEARS.

Reported by H. D. HEINITSH.

GUNSHOT WOUND OF THE FORE-ARM, INVOLVING THE ULNAR ARTERY AND NERVE.

SEPT. 15.—J. D., æt. 20, was admitted to the surgical wards of the hospital, suffering from an extensive lacerated wound of the ulnar surface of the fore-arm, caused by a charge of reed-bird shot. At the time of the receipt of the accident the patient was attempting to draw his gun from beneath the seat of the boat in which he was hunting, the muzzle being directed towards his body. In this effort the hammer of the gun was caught by the seat, and the weapon was discharged, the load—one ounce and a half of reed-bird shot—striking the anterior and lateral surface of the left fore-arm in the upper ulnar region, at that point where the ulnar artery is covered by the superficial flexor muscles. Profuse hemorrhage occurred immediately, but was checked by the application of the subsulphate of iron, made by the physician called.

On his admission to the hospital the wound was carefully examined by Dr. Eaton, the resident physician on duty in the surgical wards, who found a slight oozing from the wound. A compress and bandage were applied, and the arm was placed in an elevated position.

On making an examination the day following, the hemorrhage was found to be effectually checked; the wound was quite extensive, measuring eight inches in the long diameter and four in the short diameter. The integument was as cleanly removed as if excised by a sharp cutting-instrument; no shreds or portions were found attached; the border was sharply defined in the

entire circumference of the wound. The adjacent surface was blackened by the burnt powder, and the surface of the wound was covered with coagulated blood and the Monsel's salt. No pulsation could be detected in the ulnar artery. The fore-arm was greatly swollen, and there was a slight erythematous blush present. The entire fore-arm was enveloped in a poultice of flaxseed meal and yeast, the sound integument having been painted with solution of iodine and alcohol in equal portions. A saline purge was administered, and good diet prescribed. In two days the surface of the wound was quite completely cleaned by the action of the poultice, and the erythematous blush had disappeared. On examination, it was found that a portion of the charge had entered the tissues at a point corresponding to the upper third of the ulna, where the superficial flexor muscles pass across and down the fore-arm from their point of origin,—the internal condyle of the humerus. The cavity made by the charge was filled with wadding and a quantity of reed-bird shot. A probe was introduced, and it was found that the bone had not been injured. The distal portions of the severed ulnar artery and nerve were seen in the wound. The proximal portions could not be seen, and it was not thought advisable to make any extended search for them. It was estimated that three to four inches of the artery and nerve had been destroyed.

An examination to test the area of loss of sensation was made, and it was found to correspond to the surface supplied by the ulnar nerve. There was also complete flexion of the little finger, with partial flexion of the ring-finger.

In the course of a few days the poultice was discontinued, and the wound was dressed with carbolized oil. Under this dressing granulations sprang up, and the reparative process progressed rapidly.

Dr. Keen hastened this process, after taking charge of the wards, October 1, by skin-grafting. Out of a number of graftings two became attached, forming small islets.

October 18.—The wound has contracted in size, now measuring seven inches in length and three and one-half in breadth. The index- and middle fingers are somewhat flexed by the adhesions formed between the muscles of the flexor group. The area of loss of sensation still remains as at first described. The patient, after his discharge from the hospital, was placed under the care of Dr. S. Weir Mitchell, with a view to the accurate and careful study of the conditions following the nerve-lesion.

LACERATED WOUND OF THE LEG, PRODUCED BY WADDING FROM A SMALL CANNON.

July 4, 1874.—James M., æt. 40, was admitted to the Hospital for wound of the leg, produced in the following manner. While crossing the street, a small cannon, eighteen inches in length, one and a half inches in bore, was fired, at a distance of forty feet, in the direction of the patient; the wadding, which consisted of paper, striking the left leg of the patient midway between the knee-joint and ankle, on the outer side. The wound produced was three and a half inches long, two inches wide, and extended in depth to the inter-osseous membrane. The extensor longus digitorum muscle, with the tibialis anticus, were lacerated, together with the soft parts in immediate relation. This was the condition and extent of the wound when the patient was admitted. On examining the wound, it was found to contain a foreign substance, which, being removed by Dr. Eaton, the resident physician, proved to be the wadding with which the cannon was loaded; a small piece of the patient's pantaloons was also found, which had been forced into the wound. All foreign substances being removed and the parts cleansed, a poultice was

applied, and was renewed twice daily. Some sloughing occurred, accompanied by a fetid, sanguinolent discharge, which became diminished in quantity and less offensive on the application of carbolized oil,—one drachm to six of oil. As the sloughing occurred, the portions of tissue were removed. In a few days, granulations appeared, forming very rapidly, and the wound was soon healed.

The case is interesting, because of the amount of injury done to the parts by the wadding at the distance from the patient at which the cannon was fired. The mass, when dried, weighed one hundred and eight grains.

TRANSLATIONS.

HEMORRHAGIC LARYNGITIS (Dr. A. Böcker: *Berlin. Klin. Wochenschrift*, No. 15, 1874).—In the first of the two cases of this affection which have recently been under the observation of Dr. B., the patient was a servant-girl aged 23 years, who had been affected with a cough for two weeks, and had, during the eight days prior to her admission, entirely lost her voice. At the same time she became affected with shortness of breath, and her sputa became tinged with blood. An examination of the thorax revealed nothing abnormal, but the laryngoscope showed that the mucous membrane of the entire larynx was intensely red and swollen, while the vocal cords were covered with coagula and streaks of blood, so that their mucous membrane could scarcely be distinguished. When the respirations were of moderate frequency and depth, nothing abnormal was noticed; but if the breathing was at all forced, a whistling sound was produced by the swelling of the mucous membrane. The diagnosis of acute laryngitis, with effusion of blood upon the free surface of the mucous membrane, was made. In this condition of the larynx, there could be no question of active treatment by cauterization with the nitrate of silver, as there would be too great risk of increasing the irritation and inducing still more hemorrhage; and inhalations of a solution of common salt to which laudanum had been added were ordered. During the first few days after admission the sputa were still tinged with blood, but a rapid improvement took place, and the girl was soon discharged from the hospital and treated as an out-patient. A year later, she again presented herself with symptoms of acute laryngitis, but of less intense character and unaccompanied by hemorrhage. Dr. Böcker thinks that in the treatment of such cases care should be taken not to increase the swelling by any irritative measures, and that when favorable results have followed cauterization it has been in spite and not in consequence of it.

In the second case the patient was a man aged 52, who stated that he had always enjoyed good health and had not suffered from hoarseness. Five weeks previously, he had experienced tickling and pricking sensations in the larynx, but had had no cough. After this condition, however, had continued for some time, cough and hoarseness set in, and the patient found himself compelled to seek medical aid. By a laryngoscopic examination, it was found that there was an anæmic condition of the mucous membrane of the pharynx and larynx, and that at the junction of the vocal cords with the posterior wall of the larynx there were upon both sides ulcerations, which were surrounded by reddened and swollen mucous membrane. These ulcers were cauterized three times with a solution of the nitrate of silver, but, as no improvement was seen, the solid stick was applied to the ulcer upon the left side. This operation was followed by moderate coughing, which,

however, did not last long, and upon examination the action of the caustic upon the ulcerated surface was distinctly seen. Soon afterwards, the patient, while in the street, was attacked by a spell of coughing, which was so severe that he was compelled to stand still. The cough was very unpleasant and painful, and was accompanied by a burning sensation in the larynx. On the next day the cough had vanished, but the voice was harsh and almost gone, and there was some difficulty of breathing. Four days after the cauterization, the larynx was examined, and it was found that there was a marked redness in the vicinity of the ulceration, while the rest of the laryngeal mucous membrane was pale, and at some points there were evidences of hemorrhage. In the course of a few days the swelling and hemorrhage disappeared under a continuance of the inhalations.

In both of these cases the hemorrhage was due to the severe spells of coughing which occurred. The same result is not unfrequently seen in the eye after severe vomiting, which may give rise to effusion of blood beneath the sclerotic portion of the conjunctiva.

W. A.

CATARRHAL OPHTHALMIA IN SPAIN.—Dr. F. G. Jimenez (*El Anfiteatro Anatomico Español*, Sept. 15, 1874), in an article on the "Use of Calabar Bean in Inflammations of the Cornea," says, "Inflammations of the different structures of the eye are very frequent in this part of the country, and a great number of persons are annually afflicted by catarrhal ophthalmia, but, fortunately, this is promptly subdued by the application of silver nitrate, so that we rarely see those chronic conditions and troublesome ulcerations which were before so common.

"Our treatment of keratitis is reduced to the use of calomel and opium in small doses (gr. $\frac{1}{4}$), instillations of silver nitrate (gr. iv to f $\frac{3}{4}$ i aquæ) alternating with atropia sulphate (gr. i to f $\frac{3}{4}$ i aquæ), with mercurial inunctions and derivatives to the intestinal canal."

He relates a case of keratitis complicated with iritis, in which it seems to have been the practice to use the calabar-extract to shut out the light by contracting the pupil, and also to prevent adhesions between the iris and adjacent structures. Having, besides, the indications which he quotes from Trousseau of "painful sensation, congestion of the conjunctivæ, and supraorbital neuralgia," he applied the extract, but abandoned it after a few applications, on account of the irritation which it produced, and cured his case with atropia and antiphlogistics. He continues: "I have applied the calabar according to the phenomena which Trousseau has mentioned, and what good has it done? I believe that it has been very prejudicial. The free use of atropia has been generally sufficient to prevent adhesions, as well as to tear away those formed before coming under treatment. I have never been mortified by a failure; it has always responded to my hopes. In a case of hernia of the iris surrounded by the lymph of the cornea, the result of an ulcer, the treatment consisted in the application of the calabar-extract until the pupil was contracted and the iris was liberated, and a most happy issue was obtained. In these cases, and only these, do I believe the medicament indicated, and then the formation of the hernia must have been very recent. This treatment, then, is one which is rational, and which theory may approve and practice sanction."

W. H. W.

CASE OF GENERAL ATROPHY OF THE SKELETON (reported by Dr. D. P. Gonzalez de Velasco: *Ibid.*, Sept. 15, 1874).—A woman æt. 21 years, of lymphatic temperament, in a condition of the most complete marasmus and emaciation, who appeared to have no other anatomical elements in her economy than skin and

bones, and who had suffered various exsections of the bones of the upper extremities, which were thought to be carious, presented herself one day at the Clinic of the Faculty of Medicine of Madrid, in order to have an operation upon the larynx, which was supposed to be diseased in a like manner.

She was sent to the General Hospital, where she soon after died. A very careful and minute autopsy was made, and it was found that the elbow-articulations and the lower half of the left ulna were absent, probably from not having been reproduced after excision; the atlas had been dislocated from the axis, the cruciform, transverse, and articular ligaments had been ruptured, and the two bones were ankylosed firmly together from the odontoid process around the posterior arches; the atlas being in an oblique position to the axis and compressing the medulla spinalis.

W. H. W.

INJECTION OF ALCOHOL IN HYDROCELE (*Ibid.*, Sept. 15, 1874).—Dr. Surmay reports another case of voluminous hydrocele cured by the injection of alcohol. After puncturing the tunica vaginalis and letting out more than a litre of fluid, he injected ten grammes of strong alcohol at the temperature of 36° C. into the cavity, and let it remain. In twenty cases treated by this method he obtained eighteen cures, with only one injection for each. The remaining two cases were cured by the second operation.

W. H. W.

THERAPEUTIC NOTES.

LOCAL APPLICATION IN VEGETATIONS.—M. Duchaussoy uses a powder similar to the following in the affection sometimes known as "venereal warts:—"

℞ Pulv. sabinæ,
Pulv. aluminis, āā ʒss;
Pulv. hydrarg. chlor. corros., ʒss.—M.

Under the use of this powder the vegetations, even when quite large, decrease rapidly in size until they can be attacked with the knife.

OXIDE OF ZINC IN DIARRHŒA.—The following formula is recommended in mild cases of enteric disturbance:

℞ Zinci oxid., ʒiiss;
Sodæ bicarb., ʒss.—M.

Div. in chart. no. xii.

Sig.—One every second hour.

IN HEMICRANIA.—

℞ Quiniæ sulph.,
Acid. tannic., āā gr. xii;
Aconitiæ, gr. $\frac{1}{4}$.—M.

Ft. in pil. no. xv.

One to be taken daily, or oftener if necessary.

CALOMEL OINTMENT FOR CHANCRES.—M. Mauriac, at the Hôpital du Midi, Paris, uses in cases of infecting chancre the following dressing:

℞ Hydrarg. chlor. mit., ʒii;
Cerat. simplicis, ʒi.—M.

If the chancre is inflamed, a few grains of extract of opium may be added.

USE OF CODEINE IN BOULIMIA.—Dr. Emminghaus has used codeine with success, in the dose of one-tenth of a grain three times a day, in diabetes complicated by boulimia. The latter symptom, after four days' treatment, entirely disappeared.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

ONE BATTLE WON.

A LITTLE over a year ago, when the *Philadelphia Medical Times* first began its onslaught upon the Philadelphia Hospital, nothing seemed more unlikely than that any impression should be made upon the flinty hardness of those abuses which had slowly crystallized during a quarter of a century. Many were the complaints that came to our editorial sanctum,—complaints whose burden was that the *Times* was simply laying bare to the gaze of the world the plague-spots of our community, and that no real good, but only ill-repute, could come out of such procedure; or, in other words, that the *Times* was needlessly and uselessly disgracing our city. Unmindful of censure, we have continued the course first marked out; but it is with a feeling of real thankfulness that we to-day inform our readers that the contest is essentially over,—that the Board of Guardians have not only practically acknowledged the need of all the reforms we have demanded, but have also set themselves earnestly at work to achieve results.

We do not desire to arrogate to ourselves in this matter, but we know that the various editorials alluded to have attracted much attention, and that they awakened a wide-spread suspicion that the Philadelphia Hospital was a disgrace to our city.

In any case, so that the desired reform be achieved and the misery be relieved, we have long since ceased caring who gets the credit. We would, indeed, not have mentioned the connection of this

journal with the subject, had it not been for the fact that some of our editorials upon the medical schools of this country have given rise to angry comments precisely similar to those we have heard so often before. "You are simply ruining us abroad, and you won't do any good at home," said a venerable, but not well-pleased, professor, a few days ago; whilst others have taken up with great inward satisfaction the cry of "Ishmaelite," a name which can have no true application except in the fact that the editors of the *Times* are ready to attack any abuse within their province, no matter what interests are at stake, and no matter how smoothly age and respectability may have stuccoed over the rottenness.

In the United States public opinion is omnipotent, and the people for the most part honestly desire to do what is right in matters of public interest. To convince the people that any existing custom or institution is a curse instead of a blessing, or is even essentially unjust and wrong, is to make the great step towards reformation. We have the profoundest faith that at some not far-distant day, when the system of medical education now in vogue has been long enough in the pillory, its present supporters will be the loudest in asserting, "We always have been advocates of reform."

As a warning answer to those who now misuse that good old proverb about fouling one's own nest, and not betrayed by any spirit of self-gratulation, have we been led into these words of self-defence. We trust our readers will pardon our occupying that space which might perhaps have been better employed in discussing details of the proposed changes which will undoubtedly be hastened by the recent long-predicted but most opportune murder.

We use the expression "most opportune murder" advisedly. It has long been predicted that crowding lunatics at night into small apartments without attendants would eventually lead to such fatal result as has recently happened,—one lunatic murdering another without let or hindrance; murdering him opportunely, because it is better that one should die than many,—better that a single outbreak of violence should put an end to the steady conversion of curable into incurable insanity, the steady destruction of all the remaining glimpses of reason and of all the sense of decency in the partially insane, the slow crowd-poisoning and crowd-torturing of the hopelessly crazy, the gradual obliteration of everything human, and the *pari passu* development of everything brutal—all of which are the present daily routine in the Insane Department of the Philadelphia Hospital.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

AFTER hearing Dr. Gross's address before the Public Health Association the other night, I asked myself, "Are general hospitals, as heretofore and as at present constituted, pest-houses and abominations, the direful spring of woes unnumbered, or are they blessings?" The next day I searched for, and found in my office, the last two annual reports of the Board of Managers of the Pennsylvania Hospital to its Contributors, and, taking that of 1873, I made some approximative statistics. On showing them, however, to some of my friends, Dr. Ashhurst very properly said that they would not do to use before the Association, as they could be picked to pieces for want of definiteness. This statistical business takes time, Mr. Editor; but Dr. Woodbury, of the hospital, was so kind as to go over the record for me, and the results were still more surprising to me than my rough estimates. I did not get the paper until the third afternoon of the meeting. The session was fully occupied with other business, and I left the statement with my friend Dr. Le Conte, who said he would get it in if possible. It was simply an unvarnished summary of the mortality of the Pennsylvania Hospital for the year 1873. The year was not selected. I had intended to go over the last two years, but time prevented, and the work was great. It is often, however, a subject of remark how much one year is like another; and when we have the fact that the yearly mortality of the hospital from its very beginning ranges from eight and a half to ten per cent., I think nothing is wanting to establish my statements.

See, then, Mr. Editor, the record of the oldest "pest-house" in America (now well advanced in its second century) for the year 1873:

Summary of an Analysis of the Surgical Mortality of the Pennsylvania Hospital for the year 1872-3:

Whole number in house, 2155; of whom there died 172, or 8.59 per cent. Of these cases, 1387 were surgical, and 768 medical.

The whole number of surgical deaths was 90

Of these, there died within twenty-four hours, that is, *were killed by the accident for which they were brought to the hospital* 35

There died in 2 days 7

" " 3 " 4

" " 4 " 1

" " 5 " 2

Of troubles essentially fatal, as spine- and brain-injuries, burns, wounds, etc., there died in periods from 6 to 93 days 9

There died of cancer 3

" " tetanus 2

Cases fatal in themselves, in or out of hospital 63

Leaving a mortality of 27

to account for, of whom 4 are put down to pyæmia. The others were made up of very severe cases, such as compound fractures, exhaustive suppurative troubles, necrosis, etc., etc., and it is certainly fair to presume from the social status of most of them that their lives were prolonged and their sufferings were ameliorated as well within as without a hospital.

Query: How many died of hospitalism?

Now, Mr. Editor, think of it: all will certainly agree that the thirty-five one-day cases should be eliminated altogether from the consideration of the mortality. The hospital, as a hospital, had nothing to do with the death of the remainder of the sixty-three, and as for the twenty-seven, there was enough to kill them in themselves, without going to hospitalism to account for it, except, may-be, the four pyæmia cases. I question whether in thirteen hundred and eighty-seven surgical cases, mostly very serious, in private practice, four cases of pyæmia would not occur; and I am very certain of it, if the thirteen hundred and eighty-seven had been treated in the places where they lived. Think of the material that this hospital gets within its walls,—that, ranging from the essentially fatal ones, we have to treat those of all grades of severity,—and you have a full justification of your statement made a short time since, that, for its size, it is one of the most active hospitals in the world. No one is more surprised at the record than I am myself.

I wish to write a readable article, not burdened with statistics, but remember, I have the records of all, and I enclose you the list of the forty-nine who died during the first five days, if you choose to use it, to give some idea of the nature of injuries we have to deal with outside of this fatal line. As I have sometimes expressed it, the work we have to do on some black days is truly appalling. The list is as follows:

1, compound fracture of skull, 5 days in hospital; 2, burn, 1 day; 3, burn, 2 days; 4, burn, 1 day; 5, compound fracture of both femurs, 5 hours; 6, fracture of spine, 1 day; 7, contusions of trunk, etc., 1 day; 8, burn, 1 day; 9, cut throat, 2 days; 10, compound fracture of humerus, 1 day; 11, laceration of legs, 1 day; 12, contusions of body, 1 day; 13, fracture of spine, 1 day; 14, lacerations of legs, 1 day; 15, fracture of scapula and contusions, 1 day; 16, fracture of ribs and legs, 1 day; 17, compound fracture of both legs, 1 day; 18, contusions of trunk, 1 day; 19, gunshot wound of chest, 4 days; 20, tetanus, 1 day; 21, fracture of skull, 1 day; 22, fracture of clavicle and ulna, and contusion, 2 days; 23, concussion of brain, 2 days; 24, lacerations and contusions, 3 days; 25, rupture of urethra, 3 days; 26, fracture of spine, 1 day; 27, compound fracture of both legs, 1 day; 28, compound fracture of thigh, foot, and arm, 2 days; 29, burn, 1 day; 30, contusion of head, 1 day; 31, compound fracture of leg, 1 day; 32, laceration of head, 2 days; 33, compression of brain, 1 day; 34, compound fracture of humerus, 1 day; 35, fracture of skull, 5 days; 36, compound comminuted fracture of femur, 1 day; 37, gangrene of leg from ulcer, 3 days; 38, burn, 2 days; 39, compound comminuted fracture of femur, 1 day; 40, compound comminuted fracture of femur, 1 day; 41, burn, 1 day; 42, fracture of pelvis, 1 day; 43, compound fracture of leg, 1 day; 44, fracture of skull, 1 day; 45, burn, 1 day; 46, burn, 1 day; 47, strangulated hernia, 1 day; 48, fracture of leg, Bright's disease, serous apoplexy, 3 days; 49, compound fracture of both arms, 1 day.

I wish to be exact, also, and must state that in the

printed report there are ninety-four surgical deaths. Dr. Woodbury did not make up this statement, and could only find ninety on the books. This may arise from the former clerk including other days, or it may be an error. However, I will, if you choose, let the four go with the twenty-seven, and our record will not suffer much. Again, the report is not from January to January, but is from April 27, 1872, to April 26, 1873; but I have called it the 1873 report, as being read in that year.

So much for specific details. I cannot help thinking that this matter of hospitalism has been very much overstated of late. That there are preventable causes of mortality in almost all general hospitals, I have no doubt. That a *well-managed hospital*, of whatever construction, necessarily contains elements of fatality in the material of that construction or in its form, I very much question.

I am in favor of the study of construction and management in all directions, in order to obtain the best results; but I protest against high authorities giving the weight of their influence in such a way as to favor popular prejudice against what, so far at least, are among the best institutions of the land. If what some say in regard to these institutions is true, every willing hand should withhold his contribution, and every bequest or legacy now standing in a last testament should be revoked.

The ideas that a layman would get of hospitals from hearing and reading about hospitalism are, it appears to me, very analogous to the notions he would get of insane-hospitals through the authority of Reade's "Very Hard Cash."

Imagine a dictator, say, of the United States. Herebefore not having paid any attention to the subject, he by accident reads the famous novel. In righteous wrath he rises and issues a decree to free the inmates of all the insane-hospitals, to burn the buildings to the ground, and to hang all the Kirkbrides and Rays in his empire. And he would be right, if the novel were true; but it is not. Who that thinks about it does not know that if there is one thing that proves there is an advance in culture—one thing that proves there is, after all, humanity in man—it is to be found in the present treatment of the insane as contrasted with that of bygone years?

The layman's opinion of a hospital is very much influenced by what he may happen to see or experience on a given visit.

Let him be one of a committee, for example, going through the wards when there happen to be no very offensive cases. He will be delighted, and will report everything lovely in that institution. But in a short time another committee reports that a certain ward is very foul, and that the institution is badly managed. Our friend is surprised; but if he inquires he will find that a bad burnt case, or one of traumatic gangrene, has come in since he last went through, and in spite of everything it will make some smell. It can't be helped. Some of my friends will smile at my bringing in here

my favorite illustration. We all know that a dead horse in an open field, with all the winds of heaven blowing about it, will contaminate the air for a certain distance in spite of the *perfect ventilation*, and make it unbearable for any ordinary human being.

Now, what is a case of gangrene, or one of bad burn, in so far as the sloughing dead parts are concerned, but a mass of carrion, the same as portions, as it were, of the dead horse?

If, then, by our arts we can make the emanations from such cases reasonably bearable, so as to be able to administer to the needs of the poor sufferers, should we not be pleased at our efforts, while we study to make them still more perfect? Don't have such cases, you say, in the wards. That is just one of the questions. They must be somewhere. If we crowd them together, most or all of them will die, and may-be their attendants also. We must remember that, with the exception of the dead parts they are trying to get rid of, they are living bodies with immortal souls. Therefore some of us approve of scattering them; and I have no doubt this plan gives the best results. I do not like the idea of a special ward for such cases in the main building, for in time it will become a pest-ward indeed. For this class of cases, on account of the general comfort, I should advocate an out-ward for temporary purposes *until the sloughing stage is over*; then I would remove them and distribute them in the main wards.

Many cases of sickness and death are put down to hospitalism, that are really cases by direct exposure or contact, and the hospital, as a hospital, has nothing to do with them whatever. In the first volume of the Pennsylvania Hospital Reports I give an account of how I myself have been poisoned three several times by the inhalation of noxious gases from human beings. The first was through a post-mortem case; the second, one of private practice; and the third only, a hospital-patient. Here, I was thoughtless of myself. Here, I experienced to the full that it is not that which goeth into a man, but that which cometh out, that defileth. My knife went into a huge gangrenous abscess, and out rushed the most terrible gas that it has ever been my lot to encounter. That cost me many weeks of sickness; but what had the hospital to do with it? Why, that man would have poisoned me if I had stuck him in the Tip Top House of Mount Washington, with all the windows open; and Old Probabilities would have been struck dead on the spot.

I do not intend to enter upon the endless subject of construction; of its great importance there is no doubt. Much is to be said on all sides; and, with thorough attention to a few radical principles, the purposes for which any given institution is wanted, and the space and funds that it has to carry out its object, will regulate the structure.

Miss Lees, when she was here, is said to have made the remark that she was astonished that we seemed to have thrown away all the lessons of the war. I think she is mistaken, and that it is not absolutely necessary to have a wooden pavilion in which to carry out those

lessons, but that all of us who had anything to do with those days have learned to treasure our experience and also to apply it.

I hope, Mr. Editor, I have been fully understood. I by no means claim perfection for the Pennsylvania Hospital, for in it I know we have much to attain. But when we consider the nature of the cases that come into it, and the fact, I believe, that an annual mortality of two per cent. is considered as indicative of a healthy condition of a large community like our city, what has so-called *hospitalism* to claim in the institution under consideration, when, excluding the thirty-five killed outright on the first day of their casualty, and yet honestly put into the table, we can sum up a mortality of but 4.8 per cent. for the remainder?

The hospitalism that inculcates strict attention to every detail of administration I believe in. The hospitalism that incites popular prejudice against magnificent charities, and that sees pestilence in the structure, from the chimney-pot to the foundation-stone, I utterly condemn; believing that what is wanting is less hospital on the brain and more brains in hospital.

AIX-LES-BAINS, October 14, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I have not yet heard whether it is proposed to hold an International Medical Congress at Philadelphia in 1876. The occasion would be a very favorable one, and if it should be decided to take advantage of it, it would be in conformity with the wish expressed by the physicians who attended the Congress at Florence, that in future there should always be a reunion of the medical world in every city where an international exposition should be held. During this Congress the United States were represented by Dr. Pinckney, of Boston, but he had, perhaps, quitted Florence before this wish was expressed. If it should be deemed advisable to hold this International Medical Convention, it is now time to decide upon the list of questions which shall be introduced for discussion, and to make them known throughout Europe by means of the medical journals. At the Congress in Florence, in 1869, there were two meetings each day, morning and evening. In the morning those subjects only were discussed that were indicated on the printed list; in the evening, opportunity was given to introduce any new question that any one desired.

If I might be permitted to make a suggestion, I would ask that the question should be discussed which has never yet received a satisfactory solution,—viz., that of the origin of fermentation.

1. Do the germs of fermentation exist exclusively in the air?
2. Do they not exist in the organism of human beings? and, if so, are they brought there by the air, or engendered by the vital forces?
3. Are the germs of fermentation engendered spontaneously?

Accept, sir, for yourself and for the faculty, the expression of regard and esteem with which I remain

Yours truly,

C. MACÉ,

Physician at the Baths of Aix and Marlioz in Savoy.

PROCEEDINGS OF SOCIETIES.

AMERICAN PUBLIC HEALTH ASSOCIATION—THIRD ANNUAL MEETING.

FIRST DAY, TUESDAY, NOVEMBER 10, 1874.

THE Association was called to order about noon. Upon taking the chair, the President, Dr. Stephen Smith, of New York, made an address, briefly reviewing the progress of sanitary studies, investigations, and administrations during the past year. He alluded to the labors of the Executive Committee of the Association in preparing the various papers read at the last annual meeting, the result of which was before the Association in the shape of a volume which, in literary and scientific merit and in typographical execution, has no superior in sanitary literature. The President went on to allude to the various epidemics prevalent in different parts of the world during the past year, which had, on the whole, been an exceptionally healthy one. He regretted that the United States Government had not been represented at the recent very important meeting of the International Sanitary Conference at Vienna. The progress of sanitary organization in the United States has not, during the past year, been satisfactory, Maryland being the only State that has organized a State Board of Health, which is the seventh now in existence. In New Jersey, a Commission of Health has been appointed to report upon general sanitary questions. There are now two hundred local boards of health in the United States, and in these it is evident that there has been an improvement in membership,—the medical element having become stronger. The effort made at the last session of Congress to obtain sanitary legislation resulted in such a manifestation of interest as to give rise to the hope that at no distant day such co-operation on the part of the general government might be secured as would lead to the perfection of sanitary organizations for defence against foreign epidemics, or the control or suppression of domestic pestilences which have a national character and importance.

An address of welcome was then pronounced by Prof. Henry Hartshorne.

At the close of this address, Prof. Hartshorne proceeded to read a carefully-prepared paper on "*Excessive Infant Mortality in Cities.*"

Among those born with a normal constitution and under entirely favorable circumstances, the mortality during infancy and childhood ought to be less than at any other period of life. Yet the reverse is the case in many localities, most notably in large cities. In France, according to Bouchet, one-sixth of all born die during the first year of life; in Sweden and Finland, one-fifth; in Prussia (Berlin), one-third. Nor is the proportion very much less in some parts of England and in this country. Looking back through considerable periods, we find that in 1810, in New York, one-half of all the deaths took place in persons twenty-four years old or upwards; in 1857, one-half the deaths were of children not more than two years old. In Philadelphia, in 1807, half the deaths occurred after twenty-four

years of age; in 1856, one-half were of children less than four years old. These last figures show an *increase* of mortality, relatively, at least, among children.

Dr. Farre has shown that in London it has been otherwise. The mortality of that city, which, about the middle of the eighteenth century, stood at seventy-five per cent. of children under five years of age, had fallen at the beginning of the nineteenth century to fifty per cent., and now about twenty per cent. die during the same period. The rate has been declining a little during the past few years in New York and Philadelphia.

The causes of excessive infant mortality may be comprehended under two heads: *ante-natal* and *post-natal*. Under the former head may be included constitutional defects in parents, resulting chiefly from alcoholism, syphilis, scrofulosis, debility from overwork and under-feeding in the poorer classes; in those more prosperous, excess of nervous temperament and deficient organic development in women who become mothers. As regards the latter point, it might be safer to include men as well as women. Both run to brains and nerve too much in this country.

Post-natal causes of infant mortality differ in different climates. Northern cities lose many infants in the winter by pneumonia, capillary bronchitis, and croup, under the exposure to cold so often connected with poverty and neglect. Dr. Farre has shown that in London the degree to which the thermometer descends in December, January, or February, determines, to a great extent, the mortality of the winter.

Sir Thomas Watson asserts the mortality in England to be always larger in winter than in summer, unless under the influence of occasional epidemics. This last observation will not hold true of our large cities in this country. Nothing in our mortuary statistics in Philadelphia and New York is more constant than the proportion between the number of deaths among young children and the excess of the daily temperature above 95° Fahr. in the shade; indeed, we might safely say above 90°.

Along with this positive cause of disease taking effect most severely upon the infant population, must be apprehended and remembered also the action of impurity of atmosphere. The great importance of this latter as a factor in the mortality of infants in large cities has been fully recognized in times past. There seems to be some ground for fear that it may be at the present time too little borne in mind under the almost overshadowing attention given to another factor, itself truly of great consequence,—bad feeding of children.

Errors in infantile diet may be considered as they occur: first, when the child is suckled in part or altogether by the mother or a substitute; and second, when it is fed entirely by hand or with the bottle. The evils of neglect, early weaning, or abandonment on the part of the mother, are exemplified in the practice of baby-farming as carried out in France and elsewhere, and in a more intensified form in the frightful mortality of foundling-hospitals.

Dr. Hartshorne went on to speak at some length upon the varieties of food suitable for infants, and the care necessary in preparing it, and alluded in terms of praise to the pamphlet of directions published by the Philadelphia Obstetrical Society a year or so ago.

The diseases especially destructive to young children are, in the great cities of the Northern United States, cholera infantum, smallpox,—where vaccination has been neglected,—cerebro-nervous disorders, with convulsions, pulmonary inflammation, croup, diphtheria,—when the latter is epidemic,—cerebro-spinal meningitis,—when it is locally prevalent,—and scrofulous marasmus.

Now, what can be done to lessen this truly frightful array of influences hostile to infantile life and health?

To meet ante-natal deleterious causes connected with parentage, we must look chiefly to popular education, moral reform, and sanitary police. Against post-natal causes of infantile mortality similar measures will be of great importance: children's excursions in hot weather as at present practised, and, perhaps above all, the provision of summer-camps outside of large cities, for mothers with young infants.

Not only would the direct rescue of a large number of infants—perhaps five hundred in this city—be accomplished, but such camps would also be training-schools in healthy living to all who occupied them, the effects of which might last long afterwards. Moreover, by the removal of a part of their population, the worst quarters of the cities so relieved might be open to inspection and effectual permanent compulsory sanitation. So the tenement-houses of New York, in which half of the population of that city are born, and of whom probably half die in their first year, and the Alaska Street shanties of Philadelphia, might be and ought to be abolished, and in their place might grow up homes for working-men in which children might not only be born, but live as well.

Dr. J. R. Black, of Newark, Ohio, then read a paper "*On the Influence of Hereditary Defects upon the Health of the People, with suggestions in regard to Prevention and Eradication.*" He remarked that the prevalent idea among many worthy people, that afflictions and sickness are brought on by some higher power, resulted in hospitals and asylums for the cure of disease, while all purely mundane efforts to prevent its causation were neglected and scarcely considered obligatory in a public or personal sense.

After alluding to the gradual development of hereditary tendency to disease into disease itself, and the resultant transmission of the same, the speaker went on to state that of late the achievements of science have actually tended to produce an increase in the number of physically degenerate men and women by interfering with the natural law of the "survival of the fittest."

In conclusion, Dr. Black's suggestions in regard to prevention and eradication would include proper attention on the part of the general public to the conditions of good health.

Avoidance of impure air, of confinement to dark and especially damp rooms, and of improper clothing and food, with the regulation of marriage, were to be recommended. In fine, precisely that which prevents sickness will also prevent the stamping of an inherent defect upon the organism.

At the conclusion of Dr. Black's paper, Dr. J. G. Richardson, of Philadelphia, read a short extract from a lecture delivered by him at the University of Pennsylvania three years ago, in which, while speaking on this subject, he had alluded to the probable existence of a law the opposite of the "survival of the fittest," which he had at that time formulated as the extinction of the unfit. After some remarks by the Rev. Dr. Osgood, of New York, on the moral aspects of the subject, an abstract of a paper by Dr. Edward H. Janes, of New York, "*On the Health of Tenement-Populations, and the Sanitary Requirements of their Dwellings,*" was read by the secretary. The Association then adjourned until 3.30 P.M.

At the afternoon session, a paper was read by Dr. H. B. Baker, Secretary of the State Board of Health of Michigan, entitled "*A Report upon the Death-Rate of each Sex in Michigan; and Comparison with Dr. Farre's Life-Tables of Healthy Districts of England.*" This paper was illustrated by means of carefully-prepared diagrams, and accompanied by various statistics. The relative mortality of the different sexes was shown to

be about the same at all ages, no climatic influence showing itself in females. A comparison of deaths per 1000 of population in England and Michigan showed the percentage about the same up to the eightieth year, subsequent to which the difference was in favor of the latter.

Dr. I. S. Billings, Assistant-Surgeon U. S. Army, then read a paper entitled "*Notes upon Hospital Location and Construction.*"

After alluding to the various reasons which led to the erection of hospitals, political, social, etc., the speaker went on to say that experience has shown that large and costly hospitals, even on the pavilion plan, are not necessarily free from the evils indicated by the word "hospitalism;" and a practical trial in our late war, repeated and confirmed more recently in Europe, has led to the recommendation that hospitals should be temporary wooden structures, intended to last but ten or twelve years. The good results obtained in our large military hospitals were not alone due to their temporary character, for the morbid element due to length of occupation did not have time to develop in them. They were better located than civil hospitals, being in the country, where there was plenty of room and fresh air. The class of patients was better, the control over them more efficient, and they were more readily classified, than in civil life, thus lessening the evil of placing a number of men in one room with different diseases and wants.

When cases of zymotic disease occurred, tents were largely used; and the more they were employed the better the result. In an economical point of view it is evident that if one-half the money required for brick or stone structures was used to erect plain balloon-frame wooden buildings, and the other half were invested at ordinary rates of interest, at the end of about twelve years the amount of money on hand would be what it was in the beginning, and the old buildings could be removed and the process repeated, thus giving a new hospital every twelve years. The necessary buildings for the cure of two hundred patients should be constructed for about \$50,000. The smaller the number of patients, the greater the cost per bed. Our large metropolitan hospitals usually are, and should be, connected with medical schools, and on account of accessibility it is generally considered necessary to place them in or very near the city, where space is limited and costly. Dr. Billings doubts very much whether this supposed necessity exists, and whether it would not be possible to place hospitals five or ten miles away from the city, where they could have ample space, and place the medical colleges with them.

Many special advantages pertain to floating hospitals, a class of structure of which more use should be made.

Such hospitals might be constructed on flat-bottomed boats radiating from a central triangle or polygon, any one of which might be detached and floated off if at any time there was such a necessity.

Such a hospital could be most conveniently arranged for three hundred beds or less, and, where space can be more conveniently obtained on water than on land, would serve an excellent purpose; but the temporary character of the structure must be insisted upon.

When, from the necessities of the case, a hospital must be built in the city, brick may be used. The laundry should be located at the top of the administration building, by which means an important aid to ventilation would be gained in the sources of heat which must constantly be connected with this portion of the establishment. This arrangement has been adopted in one of the recently-built army hospitals.

The materials which should constitute the inner walls are of the utmost importance. The plaster with which they are frequently lined is not of as good a character

or as hard a finish as is desirable. They should be cleansed, not by washing, but by burning, which may easily be accomplished by the use of a large smokeless flame. Twice a year plastered walls should be thoroughly scraped, and the plaster should be entirely removed at least every ten years. In certain army hospitals whitewashed canvas has been successfully made use of as a lining to the wards; of course this can be removed and renewed at pleasure. Cases of erysipelas should never be allowed in the wards of a large municipal hospital, but should be assigned entirely separate and distinct quarters. Puerperal cases should be treated in cottage-hospitals, or by some similar plan.

As regards ventilation, Dr. Billings considered fireplaces as useful auxiliaries, but hot air as better for general use. Of course, the best plan for changing the atmosphere of an apartment rapidly is to have the floor riddled with minute holes, through which the fresh air, warmed when necessary, may be introduced: in a hospital, however, this is impracticable.

It cannot be expected that the air of a ward can be made fresh by any means; the object is to dilute the foul air to the highest degree possible. Water-closets should be ventilated from below, and their ventilation, as well as that of bath-rooms, should be entirely separate from that of the wards.

Hundreds of books have been written on hospital management, and the subject has been considered from every possible point of view excepting that of the patient. As wards are at present arranged, there is absolutely no privacy. There is also too much light for many cases; we have but to put ourselves in the position of the patient a moment, to see how trying this must frequently prove.

There is, besides, too much sameness in temperature and moisture: a temperature which is exceedingly grateful in one case must be very trying in another. There should be smaller rooms and more privacy, if possible.

In the model hospital of the future, one-, two-, and three-bed wards will be used, except for the convalescent. Special beds will be provided, having funnels suspended over them; in such a bed the patient is entirely isolated, and even where profuse suppuration or gangrene is present the surrounding air will remain uncontaminated by any odor. Above all, however, good superintendence is necessary.

Dr. William Pepper, of Philadelphia, followed with a paper "*On the Sanitary Relations of Hospitals.*"

After some remarks on the late Sir James Y. Simpson's views on what he denominated "hospitalism," Dr. Pepper went on to allude to the present drift of opinion in favor of barrack-hospitals. After referring to the frightful mortality which has been observed in many large hospitals, owing in great part to the prevalence of such diseases as pyæmia, he stated it to be his belief that this result depended not essentially upon the mere fact that the hospital was a large, permanent structure, but upon the existence of remediable faults in construction or of abuses in administration. The arguments which have been adduced had failed to convince him of the propriety of tearing down many of the large "palatial" hospitals in existence, or of avoiding the construction of similar structures in the future, but had only shown the necessity of remedying certain defects of construction and of sternly repressing certain abuses of administration.

Among these abuses may be mentioned overcrowding of patients, or placing too many wards on a limited area of ground. In connection with this subject, the case of the Norwich (Eng.) Hospital may be mentioned. This hospital, up to the year 1862, maintained a high reputation, in support of which it may be mentioned that its records up to that period showed a percentage of cures

in the operation for stone almost unprecedented; the proportion of fatal cases in a long series being but one to eight and a half. In one series of forty cases, no death had occurred.

But since 1862 this hospital has been overcrowded. During the ten years from 1854 to 1863, 2200 cases were treated, while during the subsequent decade from 1864 to 1873 3800 of the same classes of patients, including cases of burns, fractures, and surgical cases generally, were treated. Mark the result. A frightful increase in the mortality took place; the institution, which had been celebrated for its success in the operation for stone, now showed a rise in the proportion of fatal cases from one to nearly nine up to one to seven.

The conclusion to be drawn is evidently that so long as the number of patients in the hospital was kept within the proper limits all was well, and that overcrowding alone brought about this lamentable result.

But the avoidance of overcrowding is not all that is necessary; certain wards should always remain closed and in reserve, only to be occupied when the other wards are not in use. A well-built hospital of permanent construction can be purified or renovated thoroughly, and far more cheaply than a barrack-hospital can be destroyed and reconstructed. In the Pennsylvania Hospital it has been the custom, when pyæmia has appeared in any ward, that that ward should be thoroughly cleansed and vacated for months, and the result has been that on reopening it no pyæmia has appeared. In the medical wards of this hospital no epidemic has ever prevailed, with the exception of a mild form of facial erysipelas from time to time.

Dr. Pepper went on to give his views as to the proper method of keeping a large hospital healthy. Among other arrangements he suggested the use of isolated apartments or separate isolated barracks or tents of purely temporary character for cases of erysipelas, gangrene, extensive burns, and the like, as well as for patients affected with dysentery or one of the contagious fevers.

He also described the general plan and arrangement of the new Hospital of the University of Pennsylvania: a large structure built on the pavilion plan, with central administrative building and lateral pavilion connected by means of a corridor; in whose arrangements every care has been taken to avoid all the sources of difficulty observed in many large hospitals.

Continuing with the general subject of hospital management, the speaker said that it is the duty of every city to supply ample hospital accommodation, but, in consideration of the enormous sums required for their proper administration, the construction of the hospital should be with as strict a regard to economy as is consistent with efficiency.

Hospitals should not be too far from the centres of population, in order that the services of the best medical men should be secured. If placed at such a distance from the heart of a city as to secure the advantage of cheap land, it would be too far away to secure the gratuitous services of leading physicians, and a salaried medical superintendent or staff would have to be supplied, with results which are familiar.

If, on the other hand, a large hospital is built where land is dear, the plan of isolated temporary barracks can scarcely be made use of. Moreover, if barracks of a permanent character, of brick and stone, are erected, not only are they liable to become infected just as the wards of a larger permanent structure, but it may be doubted whether the cost of construction per bed would not be as great as in the latter case. If the greatly increased cost of a site, together with the great increase in the cost and difficulty of administration, be taken into consideration, the enormous practical difficulty of replacing the present hospital-accommodations of great

cities, such as London, New York, or Philadelphia, by "iron, wood, or brick villages" becomes evident.

A further great advantage of a large hospital is the aid which it affords to the prosecution of clinical instruction: it is difficult to transport cases from the widely-separated wards of a building on the barrack plan.

It is a question of importance whether the bad results attributed to large hospitals are necessarily connected with the permanent plan. Unfortunately, there are no statistics in existence which can aid us in coming to a conclusion. What is wanted is a comparison between the results obtained in large well-constructed and well-administered hospitals in the centre of great cities and those furnished by barrack-hospitals in the same locality, receiving the same run of patients and employing the same modes of treatment. Until this point is established, it is certainly more rational to endeavor to remedy, as can be shown to be practicable, the defects of construction and administration of large hospitals, than to destroy public interest in their support by decrying them as slaughter-pens and curses to a community.

In conclusion, Dr. Pepper remarked that the physicians constituting the medical staff of a hospital are not the proper persons to regulate its sanitary condition. They are too much engrossed in the cases, and too prone, in their desire to extend the benefits of the institution as widely as possible, to admit more patients to the wards than should properly be received.

A hospital whose governing body should contain medical men of experience, entirely unconnected with the staff, in conjunction with a certain number of business-men, would offer the correct method of administration.

Dr. Pepper was followed by Mr. Carl Pfeiffer, F.A.I.A., of New York, who read a paper on "*Hospital Architecture, and the Perfect Ventilation of Hospital Wards*."

Subsequent to the reading of this paper, a conference of sanitary officers and others upon methods and experience in the public health service took place.

The subject was introduced by Dr. Le Conte, late of the United States Army, who read a paper on the organization of municipal boards of health. This subject was discussed by other members of the Association, after which a recess was taken until evening.

At 7.30 P.M. a meeting of a more general character was organized, with the Hon. Morton McMichael in the chair. After a few opening remarks by this gentleman in his usual felicitous vein, the Rev. Dr. Samuel Osgood was introduced, and delivered an eloquent discourse on "*The Relations of Health and the Higher Culture*."

Prof. Samuel D. Gross then delivered an address upon "*The Factors of Disease, and Death after Injuries, Parturition, and Surgical Operations*."

This discourse, which was of considerable length, was principally occupied with questions relating to the proper management both of hospitals and of individual cases.

Various methods of after-treatment adopted by distinguished surgeons of this country and Europe were commented upon, and the conclusion arrived at that the most important point was perfect cleanliness, the particular dressing employed in any given case being comparatively a matter of indifference.

In treating of hospitals, the speaker stated that in most of them the mortality was frightful. He referred, however, to the Episcopal Hospital and to the Hospital of the University as presenting better features than most institutions of the kind, and as being well planned.

No single ward of a hospital should contain more than six or eight beds; and no hospital should accommodate more than one hundred patients. In conclusion,

Dr. Gross referred to the necessity of erecting convalescent homes or hospitals, where patients who had passed the crisis of disease could recover their strength without danger of infection from persons affected by other diseases.

On motion, a vote of thanks was unanimously tendered to Rev. Dr. Osgood and Prof. Gross for the instruction they had afforded.

The Association then adjourned, to meet at 9 o'clock on Wednesday morning.

SELECTIONS.

"LEGUMINOSE."

IN the *Berliner Klinischer Wochenschrift*, No. 15, 1872, appeared an article by Prof. Dr. Beneke, of Marburg, "On a Substitute for Animal Food for Convalescents in various Diseases of the Stomach and Intestinal Canal, and for Poor Patients." H. Hartenstein was induced by the above article, and following the suggestions therein contained, to prepare for sale, under the name of "Leguminose," a powder for making soup, composed of a mixture of leguminous and cereal meal.

In an article in the *Berliner Klinischer Wochenschrift*, No. 22, 1874, Prof. Beneke expresses approval of the Leguminose as practically fulfilling every indication for which it is intended. It has been established beyond a doubt, by careful chemical analysis, that meals of all kinds contain a large amount of nourishing matter, pure leguminous meal being not far behind beef in this respect. Being freed from any shreds of cellulose, and reduced to the very finest state of subdivision, this preparation has been made of extremely easy digestion. In addition to its highly nutrient properties and easy digestibility, its great cheapness should not be left unmentioned, the cost being only fifteen groschen (thirty-four cents) per pound, which renders it very useful as a diet for the poorer classes. By the admixture of cereal meal, also very finely divided, the proportion of nitrogenous to non-nitrogenous matter is made to vary, in the four different mixtures now in the market, standing respectively as 1:2, 3; 1:3, 3; 1:3, 9; 1:4, 8, thus being equivalent, in order, to the proportions found in beef, milk, breast-milk, and the mixed food of adults. It is shown, by most careful analysis, that the different kinds of meal contain 10 to 12.7 per cent. of water, whereas beef contains nearly 75 per cent. and cow's milk 86 per cent. One pound of fine meal contains, therefore, three and one-half times more solid constituents than meat, and more than seven times as much as cow's milk.

The method of preparing the soup for use is to stir slowly a heaping tablespoonful of the powder in a soup-plate of water, and then boil thoroughly for half an hour and add salt. The taste is said to be agreeable when thus carefully prepared, though, should any taste of the raw peas or lentils remain behind, a little Liebig's extract of beef can be added. When this disagreeable taste cannot be got rid of, it is suggested by Dr. Beneke that the quality of water with which the soup was made may have something to do with it, and that if it is very hard a little soda should be added.

As the percentage of fat in these meals is small, the non-nitrogenous elements being mainly represented by amyllum, it is recommended, when fat is particularly indicated, as in atrophied children, consumptives, and convalescents, to add to the prepared soup one to two teaspoonfuls of cream. When, for instance, the proportion of nitrogenous to non-nitrogenous matter desired is 1:3, 3, Dr. Beneke employs mixture 1 (1:2, 3), adding the cream as above.

With regard to the objection which naturally suggests itself, that leguminous articles of diet cause flatulency, no mention is made by those who have used it of any such trouble having been produced, and it probably only occurs when the peas or beans are prepared in the ordinary way.

After the second year, the system requires a small quantity of vegetable acid or of salts containing it. As leguminose contains none, when this is used exclusively the deficiency should be made up by giving lemonade, compote, fruit jelly, or wine containing it. When the stimulating effect of animal food is indicated, this can be obtained by the addition of Liebig's extract of beef, rich in creatinine and the salts of potash.

Dr. Beneke, in his endorsement of the merits of the above preparation, is supported by equally favorable reports from a large number of physicians of respectable standing in different parts of Germany who have used it as an article of diet for patients with impaired organs of digestion, for infants deprived of the breast, where cow's milk is not well tolerated in any form, for atrophied and scrofulous children, for convalescents from typhoid fever, and for consumptives; also during the acute stages of disease, as of acute rheumatism and of typhoid fever.

Should it be made easily obtainable in this country, at a relatively cheap price, the leguminose would certainly merit a trial at the hands of the profession, with prospects of proving a very superior article of diet for infants and for the sick-chamber.—*Boston Medical and Surgical Journal*.

GLEANINGS FROM OUR EXCHANGES.

THE BLISTER-TREATMENT OF RHEUMATISM.—Dr. T. R. Peacock has used the blister-treatment, introduced by Dr. Davies, for acute rheumatism since 1865. He has a high opinion of it when vigorously applied. The blisters are generally made two or three inches wide, and long enough to encircle the limb. When they have risen, they are dressed with linseed-meal poultices for several days. Usually, the patients do not complain of the blisters, nor is there any serious inconvenience from them; but as soon as the drawing is accomplished there is a marked amelioration in the swelling, pain, and constitutional disturbance. The cases most eligible for treatment by this means are those where several joints are involved and the suffering and constitutional disturbance great. Three to six blisters are applied at once near the affected joints; they are repeated as exacerbations occur, and are applied to joints as they are successively involved.

Dr. Peacock agrees with Dr. Davies that this treatment often curtails the length of the disease and prevents internal complications. He regards the blisters as less depressing than the alkalies and other constitutional medication, except tonics, which he often gives.—*The Doctor*.

PUNCTURE OF KNEE-JOINT IN HYDRARTHROSIS.—Dr. Dieulafoy (*Memorabilien*, October, 1874) mentions twenty-two cases of fluid in the joints which were treated by Desprès sixty-five times by aspiration with no evil results. Some of the cases were cured in less than a week with one or three punctures, others in less than a fortnight with four or six; some in three weeks with many punctures. Desprès thinks, however, that ordinary treatment is quite as good in most acute cases, whilst in chronic cases of fluid in the joints aspiration is of great service. Other surgeons mention deaths as occurring from puncture.—*The Doctor*.

PREVENTION OF SEA-SICKNESS IN SHORT PASSAGES (*The Lancet*, October 10, 1874).—Dr. J. Henry Bennett believes that it is an error for travellers to go on board ship with a stomach full of food, and thus give it several hours' work to perform at the very time when it is disturbed and annoyed by the tumultuous motions of the vessel. To avoid exhaustion, a good meal should be taken four or five hours previously, but the stomach should be absolutely empty at the time of embarking. One or two hours before, some very strong coffee should be taken without milk. Once on board, repose in the recumbent position should be enjoined, and nothing whatever, solid or fluid, should be taken for twelve hours or more,—even then very little. On this system, food and a stimulant are taken *before* the stomach is exposed to sympathetic irritation, and the general economy and the nervous system are thereby invigorated. As there is nothing in the stomach to digest, it remains quiescent under difficulty.

ERGOTIN-INJECTIONS IN PROLAPSUS ANI (*Medical Press and Circular*).—Von Langenbeck, of Berlin, announces that he has lately been treating prolapsus ani "with astonishing success" by hypodermic injections of a solution of ergotin (five and fifteen parts to one hundred of distilled water). He replaces the bowel, and, inserting the point of the syringe about three centimetres in depth in the cellular tissue, throws in from one to two grains of ergotin. This should be repeated every three or four days for three or four weeks, any hard faecal masses in the bowels being first removed by simple injection.

CLAY EARTH AS A SURGICAL DRESSING (*Detroit Review*, October, 1874).—Dr. F. W. Godon gives a very favorable report of his experience in the use of the above dressing. Chronic ulcers intractable to all other modes of treatment healed rapidly under the application of dry earth. Open sores, wounds, etc., of great diversity, were successfully treated by the same. In burns and scalds he says that it most effectually and completely allays pain, produces cicatrization, controls inflammation, and prevents putrefaction.

CALABAR BEAN IN TETANUS (*The Medical Record*, October 15, 1874).—Philip S. Wales reports a case of traumatic tetanus unsuccessfully treated by Calabar bean. The patient died within two days after the onset of the disease.

MISCELLANY.

AN ORIGINAL INVOCATION.—When in 1837 the late Louis Agassiz pronounced his famous *Discours sur l'ancienne Extension des Glaciers*, at the Congress of the Swiss Society for Natural Sciences at Neuchâtel, he enunciated the theory that Switzerland was formerly entirely covered by a thick layer of ice,—a conclusion at which he, in common with other observers, had arrived in consequence of the striated and polished appearance of some of the rocks, and the evident removal of others. This was considered a frightful heresy; the whole assemblage was stupefied, until Leopold von Buch, one of the greatest geologists of the time, rose in much excitement, to denounce the new theory with unsparing severity. He was subsequently shown the striated surfaces near Neuchâtel, but still, not "convinced against his will," maintained that these appear-

ances had been produced by students sliding over the rocks, and finished by retiring abruptly from the scene, ejaculating, "*O sancte De Saussure, ora pro nobis.*"—*London Medical Record*.

"WILL you help me out of this mud-hole?" asked one traveller, whose team was stuck in the mud, of another who was passing. "No, I can't stop," said the other. "I would take it as a great favor," said the man in trouble. "What are you loaded with?" asked the traveller. "Patent medicines," was the reply. "I guess I will try to help you out, then, as I am loaded with tombstones." They have been constant companions ever since.

A NEW mineral has been discovered in South Carolina, which, it is said, contains enough phosphorus to supply the whole world for a million years.

A NEW YORK man has christened his daughter Glycerin. He says it will be easy to prefix Nitro if her temper resembles her mother's.

ONE of the latest "charms" for watch-chains is a piece of lunar caustic, handsomely mounted. It is found useful in cauterizing dog-bites.

AN instance of like curing like is mentioned in the fact of brandy being a certain cure for "staggers."

WHY is it impossible to have the last word with a chemist? Because he always has a retort.

TWENTY-THREE men graduated at Dartmouth Medical College, Hanover, N.H., on Nov. 4.

A STOMACH-PUMP is calculated to make a man feel down in the mouth.

BALTIMORE is to invest fifty thousand dollars in a botanical garden.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I notice by a recent communication to the *Times* that Dr. Weir Mitchell is inquiring for cases of chorea in the negro. As resident physician in charge of the Hospital of the Colored Home of New York, during the winter of 1855-6, I saw a case of true chorea minor in a mulatto girl about fifteen years old, which terminated fatally; but during an entire year of service there I observed no instance of the disease in either form in a pure negro.

Yours very respectfully,

BENJAMIN LEE.

Philada., 1503 Spruce Street, Nov. 4, 1874.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM NOVEMBER 10 TO NOVEMBER 16, 1874, INCLUSIVE.

HASSON, A. B., SURGEON.—Granted leave of absence for twenty days. S. O. 224, Military Division of the Atlantic, Nov. 12, 1874.

HARTSUFF, A., ASSISTANT-SURGEON.—So much of S. O. 233, A. G. O., c. s., as relates to Assistant-Surgeon Hartsuff, is revoked. S. O. 244, A. G. O., Nov. 10, 1874.

WILSON, A. D., ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, on its completion, to the Commanding General, Department of Arizona, for assignment to duty. S. O. 243, A. G. O., Nov. 9, 1874.

PHILADELPHIA MEDICAL TIMES.

SATURDAY, NOVEMBER 28, 1874.

ORIGINAL COMMUNICATIONS.

SANITY AND INSANITY.

BY N. ROE BRADNER, A.M., M.D.,

Late of the Pennsylvania Hospital for the Insane, Philadelphia.

AT the request of a distinguished member of the Philadelphia bar, I have devoted some spare moments to the consideration of a problem proposed for solution, and will say at the beginning that it is one uniformly thrust at medical experts in insanity, too frequently with undue consideration on the part of the legal questioner, although in this instance the writer well knows that the problem was proposed in good faith and after the subject had religiously received the questioner's own diligent consideration and study.

Insanity has been regarded as a kind of disease; and physicians, whose calling is the treatment of disease, have been largely consulted and interested in the subject, both generally and as to individual cases. If insanity is a disease, it is the only one which is not entirely intrusted to the medical profession. So uniformly is the name of the law associated with the subject, that in some forms and stages of the attack the sufferer's friends are uncertain whether to send for a lawyer or a doctor. Were it a subject easily comprehended by one proficient in either of these professions,—requiring of him little or no extra thought or skill,—it would matter not to which branch of learning the subject would fall heir; but, if it too often baffles the best efforts of each and both, methinks it were worthy of adoption by the joint powers of law and medicine, promising its guardians as it does abundant honor, even to two of the most honorable professions, when they shall have faithfully attended it through its own periods of incompetence.

It is yet a subject upon which there is a great diversity of opinion, even among men eminent in those professions, the researches of which should not leave it in perpetual obscurity. To define insanity satisfactorily—to propose a few words that would at all times and under all circumstances explicitly demonstrate just what insanity is—would be no easy task; but more difficult, if not impossible, would it be to accomplish the object of my friend,—to draw a line accurately dividing sanity from insanity, designating exactly the point where sanity leaves off and insanity begins.

I believe a more positive example than this of a uniform mistake made by legal gentlemen as well as by some physicians, in judging of the nature of insanity, is seldom made. If it were possible to set up a well-defined character truly labelled, "This, and nothing but this, is insanity," the converse would be no less practicable, viz., to designate a certain character as the type of perfection, and say, "This, and nothing but this, is sanity." Any one conversant with the vagaries of the human mind well

knows that a more absurd idea than this could not be invented, and that a character thus appointed, if it were that of a perfect man, invincible by any theory of insanity, would excel that of ninety-nine per cent. of all men. It is no part of the theory of psychologists that ninety-nine per cent. of all men are insane; but if any abstract line be drawn that would positively exclude every person amenable to a suspicion of insanity, and a power be established to declare to those who would be regarded as sane, "Thus far and no farther shalt thou go," certainly not one per cent. of us could pass muster. Now, this theory is all false; and it is a fact that will be well learned by him who seeks a true knowledge of the disease, whether medical student or jurist, that justly to decide the question of an individual's sanity he is not to be compared with any particular idol as the standard character of sanity, but with his own natural and normal self. Certainly, what would be insanity in one person is not necessarily so in another; and if this be so, a more unjust rule for judging of his sanity than that of the particular line could scarcely be conceived. It cannot even boast, we are glad, of modern invention, but looks back for its origin to Grecian mythology, and should be considered of the same relation to the scale of justice as the famous bed of Procrustes. Those who were so unfortunate as to lie upon the bed of this bold Grecian must correspond most accurately and literally in their length: if they were longer than the bed, they were too long, and their feet perhaps were chopped off; and if too short to fill the bed, they were sadly deficient in length, and were stretched out. In either case, the bed being the exact length allotted by Procrustes to man, its occupant's length must be made to correspond,—the deficiencies and superfluities of nature being thus summarily rectified. Truly, there can be no more justice in creating a standard mind than a standard stature; and we doubt if the prudent lawyer lives, no matter how often he may have attempted to confound a medical witness with demands for a particular gauge of mental soundness, who will not after due and careful consideration join with us and pray that the Procrustean view of insanity for which the legal profession has contended may meet with no favor in our age of enlightenment. These remarks have particular reference to those forms of insanity called doubtful or obscure, where, in the words of Dr. Bucknill, "its recognition is arduous in the extreme." "Ploughmen and blacksmiths," the same eminent psychologist has said, would be sufficient to decide when men were insane, if all cases were as plain as some. But, unfortunately, these plain and demonstrative cases are those of the only form of the disease recognized or acknowledged by a larger part of mankind. The public is reluctant to believe a man is insane unless, in the words of a worthy police-officer, "he is wild and raging, his eyes standing out, and his hair standing up;" and in the same measure there seems to be a distrust of medical experts whose observation and experience have enabled them to do all that has been done in this important and

difficult work. Nay, too often the opinion of blacksmith, ploughman, or other person wholly unacquainted with the subject is accepted in preference to that of the expert, although he may have devoted to and exhausted the best years of his life in its exclusive study.

In a recent court, a gentleman learned in his profession, and high in office, being asked if the person in question was insane, replied in the following words: "Of course he is insane: I am not one of those who consider it necessary to live five or ten years in an insane-asylum to tell whether or not a man is insane." The very next question put to him was concerning the condition of the urine in a certain form and stage of insanity; and what could he answer more or less than he did,—that he was not sufficiently experienced in the disease to be enabled to answer? This gentleman would scarcely have attempted to depreciate the experience of physicians in hospitals for the insane, as he did in his first answer, if he had known that he must so soon call such a one to his rescue. By just such examples as this it is often made apparent that the study of the mind, sometimes of a single mind, must be the work of time. The study of insanity, too, like that of nature, can scarcely be profitable except in the mode of practical observation. The man who has been blind from his birth can form but an imperfect idea of the beauties revealed by vision, and one without experience with insanity cannot correctly judge of the difficulty in deciding between some cases of sanity and insanity. The infirmity may be such as to be detected by the expert at the first interview, or so obscure that the most skilful physician may be uncertain after many and protracted meetings. True, it may be said that insanity so difficult of discovery may seem far-fetched; but it has been my experience that where insanity is discovered after having been so long concealed or disguised, it is most often a dangerous order of the disease, with promise of disastrous results. The importance, then, of a thorough, lengthy, and unobstructed inquiry into each and every question of obscure insanity cannot be overestimated by those desirous of arriving at a just and reliable decision; and now, as time advances, the necessity for an extended knowledge of this grave disorder is being more keenly felt, for, with a pace no less rapid than the course of time, insanity is growing and increasing upon us. It is, however, to those called the criminal insane that these remarks are intended to invite the especial consideration of thoughtful people, and I cannot allow this opportunity to pass without entering my protest against the unqualified name of "criminal insane" as applied to this class of sufferers.

It is just and humane that such a distinction should be made between the outrageous acts of those of sound and unsound mind, that the irresponsible shall be spared the punishment justly due the malicious criminal; but our enlightened humanity has but half expressed itself when, on the ground of insanity, we acquit the accused of crime and yet brand him "criminal insane." The outrageous acts of insanity, like those of infancy or

febrile delirium, are those of disease and incompetence, regretted most keenly by the unfortunate agent after he has become enabled to understand the nature of the act committed. True, murder is crime, but when an infant causes the death of another through his inability to comprehend the terror of death or consequence of the particular act of mischief, the child should not and forever be branded criminal; and surely where any act, no matter how terrible its character, is positively that of insanity, the unfortunate actor should be regarded with the same consideration with which we are constrained to look upon those of infancy. And, presto! while I write, the district attorney for this city has in his official capacity uttered a declaration, in but few words, that should add lustre to any name. In a murder-trial just closed, the defence of insanity being established, Mr. Mann boldly declared, "It was not this defendant, but a disease,—insanity,—that did the murder." Crime should be punished; insanity should be cured.

The physician and the lawyer should be as vigilant in protecting the insane from punishment as in demanding that a criminal shall be punished. Crime, too, is the real enemy of insanity; it is the wolf that knows the immunity of the proper kind of clothing; and hence the plea of insanity is a frequent one of defence in legal trials of supposed criminals. It is an awful responsibility that rests upon him who judges whether or not the plea is just; and it is here that the careful psychologist can often detect unmistakable proof of the disease even in one whose sanity had never before been questioned. Dear reader, your best brother may be as innocent of crime as the youngest babe, and a disease—insanity—may place him in the criminal cell before another sun has risen and set. If so, would you call upon ploughmen to investigate his mental condition? Ah, no! The most learned and skilful of psychologists would then be scarcely equal to your demands; but that host of mankind with whom you probably are now numbered would not believe in your suffering brother's insanity, unless, forsooth, he was roaring, furious, and uncontrollable. Should their clamor for justice result in a legalized execution of your insane brother, the barbarous act would not be the first, nor the second, nor yet the third instance of its kind for which American law and justice must blush in shame.

Let not the wicked escape the punishment their crime merits, however cunningly they may conceive and devise a defence of insanity; but doubly more let us be careful to avoid all legal murder of our insane.

And now a concluding query: How are we to distinguish between the acts of criminals and those of the insane? Space will not now admit of an anticipated review of the varying opinions expressed by those high in authority, both here and abroad, and the brilliant dictum of Dr. Isaac Ray alone will be quoted: "In trials of criminal cases, the single and only essential question is whether the act was or was not the offspring of disease." Thus did the eminent medical jurist strike the key-note of justice that should forever silence those discordant

theories that cry aloud for plumb and gauge wherewith to measure each and every mind in comparison with their own particular Procrustean idol of sanity. True, it may be objected that the proposition of my venerable friend does not absolutely shorten the investigation, and the same lengthy observation of doubtful cases must still be granted to an expert before he can satisfy himself whether or not the individual is of diseased mind, or that his disease is the parent of any particular act. But why shorten the time? Why should not medical experts be allowed abundant time and opportunity for the most searching investigation into those cases, the facts of which they are expected to maintain against the most embarrassing opposition?

Need the course of justice be in any way diverted by postponing any trial until no reasonable doubt exists as to the mental condition of the prisoner?

In the State of Maine there is a law that whenever insanity is to be the defence in a criminal case, the prisoner shall be sent to the State Hospital for the Insane, to be observed by the medical officers until they are satisfied as to his mental condition. Of the first thirty persons thus observed at the hospital, six were found to be sane and twenty-four insane. Who is there to contend that the jails of our own proud State do not contain many poor victims of this terrible disease, unmercifully suffering in a manner prohibited in Maine for a quarter of a century?—nay, who are only awaiting the progress of the law to add their number to those who have suffered the full penalty of crime, and whose only crime is insanity?

OVARIOTOMY—SUCCESSFUL OPERATION.

BY W. H. MYERS, M.D.,

St. Joseph Hospital, Fort Wayne, Ind.

C. S., aged 36 years, residing in Leo, Cedar Creek Township, Allen County, Indiana; married nineteen years; mother of nine children, eldest eighteen years, youngest two years, one abortion. Emaciated; habits of life regular; surface of body cool; no glandular swellings of the loins; varicose veins on the right limb, without œdema of the feet.

The measurements on July 29, 1874, were as follows: Umbilical level, forty-one and a half inches; ensiform cartilage to the umbilicus, nine inches; umbilicus to symphysis pubis, nine and a half inches; from right anterior superior spine of ilium to umbilicus, eighteen and a half inches; from left anterior superior spine of ilium to umbilicus, nine inches. Mobility of tumor marked; evidence of adhesions on the right side. Over the abdominal surface dilated veins were numerous. Fluctuation decided; sounds on percussion, resonance on the left side, dullness on the right side.

The situation of the uterus natural; neck to the right; mobility normal; tumor projects; can be felt in the cul-de-sac. Womb-sound introduced into the cavity of the womb two and a half inches; rectal examination revealed nothing abnormal; catamenia, date of commencement, fourteen years; no sudden suppressions; cessation three months ago; urinary organs normal; occasional pain in the right hypochondrium; rests best on the right side. Signs of ill health began fifteen months ago; right limb weak, and also pain in the right

groin. She says she discovered the tumor in March or April, 1873. Enlargement rapid; first on the right side; not long until it became central.

April, 1874.—Dr. Woodworth and myself used the aspirator, and obtained an albuminoid fluid. From this puncture local peritonitis supervened, so that she was quite ill for nearly one week, and from it, we may infer, the adhesions originated that we encountered during the operation.

The diagnosis was made of a multilocular ovarian tumor, originating from the right ovary, and it was inferred from the rapid growth that life could be prolonged but a few months.

The patient was ordered good diet, baths, and iron, continued for several months, up to the time of the operation. Forty-eight hours before the operation she took one ounce of castor oil, and from this last period up to the operation one grain of opium every six hours. The morning before the operation her diet was restricted to gruel, and a simple enema was administered. She was dressed in flannel, with woollen stockings. A light gutta-percha cloth was placed in front of her, and through it was cut an opening sufficiently large to receive the tumor, and the edges fastened to the skin by a circle of adhesive plaster.

The operation was performed Thursday, August 6, at 2 P.M., at St. Joseph Hospital, Fort Wayne, Ind., in the presence of Drs. A. Woolley, of Warsaw, and A. D. Emmanuel, of Antwerp, and I was assisted by Drs. B. S. Woodworth, I. N. Rosenthal, T. P. McCullough, T. J. Dills, C. Lihler, H. V. Sweringen, I. N. Myers, E. L. Tons, James E. Moore, and F. Criswell. The patient having been etherized by Drs. I. N. Myers and E. L. Tons, she was brought into a small, retired, private ward, and placed upon a table, twenty inches wide and five feet in length.

A median incision about five and a half inches long was now made from the umbilicus to the pubes. Very little hemorrhage followed. Adhesions were found anteriorly, obliterating all traces of distinction between the walls of the tumor and the peritoneum. Discovering a point on the left side in the lower third of the incision where the adhesions did not exist, I was enabled to introduce a sound, No. 8, and with it to easily break up all adhesions in front, and then liberate the bond of union between the peritoneum and the cyst-wall.

Tapping the cyst with a large trocar, the fluid passed out through the canula, and was conducted by an india-rubber tube into a vessel underneath the table. About fifteen pints escaped in this way. An incision was now made into the tumor sufficiently large to allow the hand to pass into it in order to relieve the weight of the tumor. Cysts which had not been emptied before were now punctured, and the walls or septa were then broken down by the hand. The interior consisted of semi-solid masses, divided by trabeculae into numerous cavities filled with a viscid, colloidal substance. The diminished tumor was now drawn through the incision. As we found omental adhesions, which were quite extensive and bled upon the slightest touch, we tied the omentum beyond the adhesions, and divided between the ligature and the attachments. A portion of the omentum larger than the hand was removed, and the ligature brought out at the upper portion of the incision. All the ligatures and sutures used had been thoroughly carbolized, the material being Chinese silk.

The contents of the tumor having been broken down and the adhesions broken up, traction was now made, the edges of the wound being held by Dr. B. S. Woodworth so as to approximate the cyst and to prevent the escape of any portion of the intestinal canal, whilst I secured the pedicle by Atlee's clamp and separated the tumor with the knife.

The fluid and semi-fluid contents of the tumor

amounted to thirty-four pints. The cyst weighed six and a half pounds. Considering the specific gravity of the fluid in the third group of fluids usually or always belonging to multilocular cysts as from 1010 to 1040, the weight of the cyst with its contents was between forty and forty-five pounds.

The pedicle came from the right ovary; was seven inches in length, two and a half inches in width, and half an inch thick; it was easily managed, and there was no hemorrhage.

After the clamp was applied, it was so placed as to rest in the lower part of the wound. The opposite ovary was healthy, and the uterus normal.

The abdomen having been thoroughly cleansed, the wound was closed by silk ligatures about eighteen inches in length, threaded at each end on a strong straight needle. The needles were introduced from within outwards, through the peritoneum and the whole thickness of the abdominal wall, the ends of the sutures being held by an assistant, and a flat sponge placed over the bowels. All bleeding having ceased, the protecting sponge was removed, the sutures tied, and the ends of the threads cut off.

The part of the pedicle included in the clamp was mummified by the application of the persulphate of iron, and over it was placed charpie. Strips of adhesive plaster, the width of four fingers, were placed posteriorly and drawn over the front part of the abdomen, and made to fit snugly. Over these strips was placed cotton-wool, and over this was pinned a woollen binder, close-fitting. The patient was now placed in bed, with bottles of hot water to her feet and blankets about her, and morphia administered hypodermically. Threatening vomiting was prevented by pulverized ice internally and sinapisms over the epigastrium. No depression followed the operation.

Thursday, 4 P.M.—Pulse, 104; temperature, 97°; respiration, 32. During the next twenty-four hours the patient passed sixteen fluidounces of urine.

Friday, A.M.—Pulse, 108; temperature, 101°; respiration, 24. Twelve fluidounces of urine.

Saturday.—Pulse, 112; temperature, 103°; respiration, 24. Passed sixteen fluidounces of urine. Rested well; slept nearly the entire night.

Sunday.—Pulse, 100; temperature, 98°; respiration, 18. Slept well during the night. No thirst; continued the ice. Some symptoms of diarrhoea. At midnight, introduced a suppository of opium, and at 6 A.M., another. Surface moist. Free of pain. No flatulence. All this time she has subsisted upon a milk diet exclusively.

Monday.—Pulse, 100; temperature, 98½°. Rested well during the night. Continued milk diet. Opium suppositories continued. Slight abdominal pains from flatulence. Urine, sixteen fluidounces.

Tuesday.—Pulse, 100; temperature, 98½°; respiration, 18. Urine, eighteen fluidounces. Appetite good. Entirely free from pain; hopeful. Wound dressed by cutting the plaster and re-supplying it from the cut ends by attaching the new strips—dry dressing. The wound almost entirely healed; the pedicle dried up, will soon be removed; the slightest trace of pus only.

Wednesday (morning).—Pulse, 88; temperature, 97½°; respiration, 18. Slept during the night. 12 M.—Pulse, 84; temperature, 98½°; respiration, 19. Urine, sixteen ounces. Milk diet continued. Evening.—Pulse, 88; temperature, 99°; respiration, 16. No thirst. Appetite good. For the first time is lying upon her right side.

Thursday (morning).—Pulse, 88; temperature, 98¾°; respiration, 18. Urine, sixteen ounces. Evening.—Pulse, 90; temperature, 100¼°. 9½ P.M.—Free movement of the bowels without enema or purgative; relieved her of flatulence and pain. Slight abdominal

pain. 11 P.M.—I found her sleeping. Pulse, 80; temperature, 98½°; respiration, 18. Inclined to sleep. Directed the nurse to continue the suppositories of opium every six hours. She is now perspiring.

Friday, 6 A.M.—Slept well. One slight movement; costive, not liquid. No tympanitis. Pulse, 78; temperature, 98½°; respiration, 18. Appetite good. 9 A.M.—The stitches were removed, and the wound was found to have almost entirely united; pedicle dried up, and the clamp only a source of irritation; this we removed cautiously. After the application of powdered persulphate of iron, we applied dry charpie over the line of the incision, and the edges of the wound were supported by narrow strips of adhesive plaster. We now readjusted the broad strips of adhesive plaster, over them cotton-wool, and supported all by a flannel bandage. Appetite good. Beef-tea to-day, with bread. 6 P.M.—Pulse, 80; temperature, 97½°; respiration, 16.

Saturday, A.M.—Pulse, 80; temperature, 96°. Slept well during the night. Appetite good. 6 P.M.—Pulse, 84; temperature, 96½°. Very comfortable. Line of the incision united, nearly free from pus; pedicle united to abdominal walls. Nothing remains but the ligature applied to the omentum. One movement from the bowels; not liquid. No distention. Progressing finely towards a rapid recovery.

The omental ligature came away on the twenty-seventh day. The rebound to health was rapid and complete. This may be attributed partially to the preparatory treatment, and the complete isolation of the patient, with absolute rest.

NOTES ON THE PERFORMANCES OF TWO ONE-FIFTIETH OBJECTIVES.

BY JOSEPH G. RICHARDSON, M.D.,

Microscopist to the Pennsylvania Hospital.

IN selecting the subject of one-fiftieth objectives for my remarks this evening, I have been chiefly influenced by the fact that through the kindness of Dr. J. H. McQuillen, Corresponding Secretary, and Mr. Charles Stodder, a corresponding member of the Section, I have recently had the opportunity of examining a Tolles one-fiftieth immersion, and of comparing it with my own Powell and Leland's dry one-fiftieth, and also with my immersion one-twenty-fifth, made by Wales.

My experience with lenses of this focal length is too restricted to enable me to contribute much information regarding them, and my intention is therefore chiefly to elicit discussion, and to narrate the results of my own trials with the most scrupulous honesty, and, so far as lies in my power, without prejudice.

Among the test diatoms upon which I have brought these objectives to bear, the *Pleurosigma angulatum* offers, of course, no difficulties.

The transverse striæ of *Surirella gemma* are likewise easily shown by all these lenses, but the finer longitudinal lines are not distinctly visible by gaslight. Under the employment of monochromatic sunlight (Col. Woodward's ammonio-sulphate of copper method), these faint markings, which Frey says are "only to be mastered with much pains," are clearly visible even under the one-twenty-fifth. It is especially worthy of note that, in my experiments

a few days since, the basket-like arrangement of these lines, produced according to Hartnack by elongated hexagonal areolations, first came distinctly into view when the Wales immersion one-twenty-fifth was exchanged for the Tolles immersion one-fiftieth, and after I had vainly sought for it with the former. In this observation the obliquity of light, the kind of illumination, and my skill (or unskilfulness) as a microscopist were all constant factors, so that the superior performance seems certainly due to the superior qualities of the higher-power lens.

The transverse lines of *Amphipleura pellucida*, displayed by the aid of monochromatic sunlight, were better defined by the Tolles immersion one-fiftieth than by the Powell and Leland's dry one-fiftieth or by the Wales immersion one-twenty-fifth, the two latter only exhibiting the markings near the edges of the frustules.

Of the so-called *Podura* scales (of which we were informed at our last meeting it was "impossible to obtain slides with covers thin enough to be used"), I have now upon the table some good specimens of my own mounting, under cover about one-five-hundredth of an inch thick, which you will have an opportunity of "using" in testing the lens. As the result of my own comparative trials with central light, I find that the definition of the note-of-exclamation-marks afforded by the Tolles one-fiftieth is somewhat superior to that given by the Wales immersion one-twenty-fifth and the Powell and Leland dry one-fiftieth. Its advantage over the latter of these two objectives is very slight, being less marked than that shown when it is applied to some other test-objects. No one of the three lenses bears even the C eye-piece without marked loss of definition, greater in my opinion than that undergone by some of Mr. Tolles' or Mr. Beck's immersion one-tenths, even when combined with the E or No. 5 eye-piece.

Applied to my favorite test-objects, the salivary corpuscles, neither the Tolles, nor the Powell and Leland one-fiftieth, seem to surpass the working of Wales's one-twenty-fifth, either in exhibiting the dancing molecules, or in defining the delicate cell-wall which restricts the movements of the latter. Probably, however, long study and constant practice upon the globules of the saliva have enabled me to obtain proportionately better results in their resolution under my one-twenty-fifth, with which I have chiefly investigated their structure.

The statement of my friend Dr. Hunt that under this one-fiftieth a *Bacterium* looks like the mast of a ship in a fog, led me to careful examination of these organisms, and I am confident that his description applies chiefly to the object when seen just beyond the proper focus. The *Bacterium* so focussed seems, it is true, most sharply contrasted to the rest of the field; because, being cylindrical, it acts as an elongated convex lens, and concentrates the light in a line one-twenty-thousandth of an inch this side of its true position. Formerly I made the mistake of supposing that when this area of concentrated light was in focus, I had properly adjusted the instrument, and was much dissatisfied with the Wales

one-twenty-fifth because the outline of the object was indistinct. Prolonged study, however, taught me to perceive my blunder, and by correct focusing to bring into view the margins of the *Bacterium*, limited by a delicate hair-line almost as fine as can be drawn by an ordinary writing-pen; and this I have also done with the Tolles one-fiftieth now under consideration.

The fibrin filaments of coagulating blood, freshly drawn upon a slide, which in persons free from any inflammatory or cachectic tendency often form a test of moderate severity for the higher powers, are well shown under the Tolles one-fiftieth, and by its aid I observed that in one instance the net-work of filaments was confined to the lowest stratum of the drop, immediately in contact with the surface of the slide, and did not extend through the whole depth of the liquor sanguinis.

In order to overcome the insuperable obstacle which has hitherto prevented a one-fiftieth from being properly tested in Philadelphia, I have devised the following very simple method of mounting diatoms, *Podura*-scales, etc., under "sufficiently thin covers." Select a piece of clear, colorless mica, and, having split it into layers about one-five-hundredth of an inch in thickness, cut it with sharp scissors into squares measuring one inch on a side. Then, with a writing-diamond or otherwise, cut or break the cover of a mounted slide of, for example, *amphipleura* (to the under surface of which the frustules adhere), into small fragments, say one-tenth of an inch across, and invert one of these upon a fresh slide, to which it should be attached by a minute portion of Damar varnish. Lastly, cover the diatoms, which remain adhering to what is now the upper surface of the fragment of thin glass, with one of your squares of mica, and seal up the latter at the edges with a very little Damar cement. Of course, thin sheets of glass, if they can be procured, may be used instead of mica, and are, I think, decidedly to be preferred, because less liable to become injured under careless manipulation, as well as permitting a somewhat sharper definition.

Finally, in regard to the other important but secondary qualifications of a good lens, I find that both these objectives are not quite achromatic; the Tolles glass being less perfectly corrected in this respect than that of Powell and Leland. Both lenses give a good flat field, and their magnifying power is fully up to the usual standard, as they each afford with the No. 1 or A eye-piece an amplification of over twenty-five hundred diameters.

I think it justly due to Mr. Joseph Zentmayer to add that several of the above-mentioned observations with the one-fiftieth objectives were made, with unexpected satisfaction, upon one of his new student's microscope stands. Although the stage movement in this form of apparatus is by hand only, and the fine adjustment beneath the stage is of a comparatively inexpensive variety, yet such are the delicacy and firmness of its workmanship that there was no difficulty, by careful manipulation, in obtaining excellent results as above stated, even with the highest powers.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

THE ASSERTED DECADENCE OF PHILADELPHIA AS A MEDICAL CENTRE.

A RECENT issue of the *New York Tribune* contains a long editorial upon New York as a medical centre, so untrue and unjust in its general drift, if not in many of its individual assertions, that we desire to say a few words in reply, especially as the *Philadelphia Medical Times* is quoted in the article. The gist of the column and a half is that New York has, as a medical centre, far out-distanced this city, which is stated to be proven by the facts that there are twice as many students attending the three New York as the two Philadelphia medical schools, that there are many more medical journals published in New York than in Philadelphia, and that the principal text-books of the country are written and published in New York.

Our comment upon these asserted facts is simply that they are not true. The *Medical Times* stated early in the winter, before the full classes were in town, that there were over six hundred medical students in this city: inquiry at the schools shows that the conjoint matriculant list now foots up to seven hundred and ninety. The assertion of the *Tribune* that there are nearly twelve hundred students in attendance on the three schools in New York City we believe to be a gross exaggeration. Our belief rests not merely upon general principles and the published reports of the New York colleges for last year, but also upon specific inquiry among those who are in a position to know. There appear

to be about eight hundred students in New York; certainly nine hundred is a very full, if not an excessive, estimate.

The *Tribune* enumerates twelve medical journals as published in New York. Several of them are, strictly speaking, not medical journals; one, at least, not a journal at all. On making out a parallel list for this city, we find that it reaches to the number of ten. Of the New York journals, three or four are still in the year of their birth, and the infant-mortality in our neighbor city is as excessive among journalistic enterprises as among human beings.

If the number of issues printed per year is taken as the basis of comparison, and not merely the number of journalistic titles, Philadelphia is ahead of New York. The latter city gives to the world yearly eighty-seven numbers of medical journals, whilst Philadelphia issues one hundred and sixty numbers. It would be very difficult to get at the official figures, but we believe we are correct in stating that more individuals are reached by the Philadelphia than by the New York medical press.

Taking up the question of text-books: of the seven branches usually taught in the colleges, Philadelphia holds almost undisputed sway over one, and in several is contested only by foreign treatises, whilst New York does not hold the market in a single instance. In *materia medica and therapeutics*, American books written and published in Philadelphia absolutely command the market. In *surgery*, the greatest work extant in the language is that of Prof. Gross of this city; whilst Ashhurst's and the reprint of Erichsen supply almost wholly the demand for less comprehensive treatises. New York contests, it is true, for a share by means of the recent book of Dr. Hamilton. In *obstetrics*, Hodge's great treatise is the only American work of any authority at present on the market. In *physiology*, New York is undoubtedly pre-eminent; but we are sorry to say that Philadelphia reprints of English works largely interfere with the sale of the very meritorious treatises of Draper, Flint, and Dalton. In *anatomy*, the only American work of present authority is the product of a Philadelphia pen. In the *practice of medicine*, both New York and Philadelphia are represented, with, so far as we know, equal sales. In *medical chemistry and toxicology*, Philadelphia has produced several recent standard treatises; New York not any. Indeed, if medical activity is to be measured by the production of successful text-books, our ambitious neighbor is, in racing parlance, "nowhere."

New York is, however, decidedly ahead of this

city in the cultivation as well as in the literature of specialties: this we freely acknowledge; and it seems to us the only danger, so far as New York is concerned, of our city's losing its medical pre-eminence. The causes that have led to this are, we hope, however, dying out. As our allotted space is full, we must reserve their consideration for a future occasion.

WE print to-day an article from the pen of Dr. Garretson as a leader, partly in order to give prominence to it, and partly because in many points we agree with the sentiments therein expressed. As comment, we simply reiterate what we have before said, that if dentists are ambitious to be considered medical specialists they must undergo a general medical education; that so long as there are distinct dental colleges giving a peculiar degree, so long will physicians refuse to acknowledge dentists as members of the profession. An individual dentist who has taken the medical degree may assuredly be received as a brother practitioner, but a simple D.D.S. never. The difficulty with the physician practising dentistry is that he is classed by the general and medical public with the mere dentist. Why should there be D.D.S., any more than D.O.S., or D.A.S., or D.T.S., or D.S.M., etc., etc., *ad nauseam*?

LEADING ARTICLES.

UNIVERSALITY IN EDUCATION—SPECIALISM IN PRACTICE.

THE heading of this article, which constitutes a curt putting of a most important matter by a former editor of this journal, serves particularly well as a text to a few thoughts which the writer wishes to present concerning the specialty of Oral Surgery.

It is a fact not to be denied or disputed, that, as communities grow in numbers and in intelligence, so the work of the individual members thereof breaks itself up into the practice of specialties; and this occurs as the result of an organization in man which leads him to take cognizance of results as evidences are presented to him in the practical working of things.

Specialism, however, is a bad thing for the individual man; that is, it is bad for him whose manhood and whose mental powers are merged and allowed to become lost in specialism; it is, on the contrary, a great good thing for a community at large, as is demonstrated by the voice of that common experience out of which the practice obtains and grows.

The bad of specialism finds all the antidote possible in that circularity of education which is the constant reminder to a specialist of the littleness of the work

in which he is engaged: it holds him to modesty and to a becoming humility in the presence of the *alma mater*; it is the balance-wheel.

That the profession at large have long been found disposed to ignore specialties and the specialists is a matter not at all to be wondered at, neither found fault with. Specialists, until the present age, have almost universally proved to be arrant quacks; and the assumption by such of a pretension to belong to the grandest of professions could not possibly have proved else than a stench in the nostrils of the educated and refined. The title of doctor ought to imply a very great deal; and to him whose learning and whose habits of thinking and acting place him on a level with the proper meaning of such a title, it cannot but appear as an offence in any one whose assumed relation with the degree serves but to degrade and to belittle it.

As a specialty, what is known as Dental Surgery has assumed prominent place, and it has come to such position because of the intrinsic merit found in it. It embraces a multitude of doctors,—this term being employed in the fulness of its ordinary meaning,—and it affords harbor for perhaps quite its share of impostors, whose knavery is equalled only by their ignorance and impudence. In the ranks of this specialty, the writer does not hesitate to say, are to be found some of the best-educated men in the country; and, so far as the ethics are concerned, he has as little hesitation in affirming that he has never met with higher sense of honor among practitioners of any profession: the physician at large may claim no precedence over the dentist in this respect.

Like general surgery, the dental specialty has had an up-hill track; and, like surgery at large, it has come to its present position because of the good encompassed in it, and which good the people cannot do without. As a specialty, it is a something fixed; it is a thing that is.

Has it attained to its highest good?

Galen, centuries ago, made the assertion "that the cause of the toothache was known alone to God." In this remark resides, perhaps, the origin of dental inquiry. Compare now this ignorance with the experience comprised in the dental curriculum of to-day. Such a comparison will best show what dentists and dentistry have done.

But what has been accomplished, while it is very much, is seen and felt by the true leaders of this specialty not to be any way near what is to constitute the fulness of its work; hence, year by year, the studies pursued in dental colleges grow wider and wider. Chairs of surgery have been established; chemistry is taught with a thoroughness that leaves little to be accomplished; physiology, not satisfied with the text-books, takes its secrets from organs which pulsate and are alive; diagnosis has long ago passed beyond the mystery of Galen, and seeks to-day for the hidden things which lie among brain-cells and hepatic lobes. To-day, to be a professor in a dental college is to occupy a position that reflects honor on a man, and which

affords the occupant of such a chair a field of great usefulness in which to labor.

Dental surgery, however, is but a little part of a common circle to which its duties pertain; hence, step by step, slowly, it is true, yet surely, is the specialist of this department advancing to a work more worthy his education, and more in correspondence with the claims he puts forth to belong to a learned profession; the dental surgeon is advancing into the oral surgeon.

Oral surgery—while it educates the dentist, simply as a dentist, more soundly and scientifically than heretofore—treats of the diseases and surgery of the mouth, jaws, and associate parts. What it is, the writer cannot but think that he has clearly and explicitly set forth in his book, entitled “A System of Oral Surgery,” and he may not but rest under the conviction that many years will not elapse before it will be found that in this new departure the complexities of the surgery of these parts will be rendered not less plain than have been the mysteries of Galen’s confusion concerning the cause of toothache. In such a new departure, suffering humanity will come to a gain of not less consequence than that found in the establishment of the specialty of ophthalmic surgery; and who does not understand what great good has been evolved here?

But to be an oral surgeon demands in every respect the same order of education that pertains to the surgeon and physician at large. Hence, all practitioners of dentistry who have advanced into this new field are found possessed of the degrees both of dental and medical colleges; and, as things now exist, these two roads must be passed over before one can come to any ability to practise oral surgery: he must pass through a dental school that he may perfect himself in the knowledge of dental surgery; he must go through the medical college that he may know of general practice. And even yet a deficiency is found. The means to make special study of his special subject the medical school fails properly to furnish. He may listen to a few lectures on the subject of mouth- and face-operations, and the clinic will furnish him distant views of mouth-diseases, but these are not at all sufficient to his purpose. He needs to handle, to operate, and to prescribe for himself.

The oral surgeon needs lessons which, as yet, are widely scattered,—so scattered, indeed, that to attempt to master the subject, as becomes a specialist, is necessarily to involve one’s self in expenses which the purse of few students will be found able to bear.

What, now, is the remedy?

No question is so constantly propounded to the writer as the query concerning the manner of studying oral surgery; and it is a confession he is compelled to make that there is no plain answer to it.

The medical college, as at present constituted, cannot make an oral surgeon, neither can the dental school. The one teaches well and fully part of what the student desires to learn, and the other informs him as thoroughly in another direction of the knowledge required; but these are as two end-spans of a bridge

the middle arch of which is lacking,—a bridge all right so far as it goes, but over which one cannot pass.

The question is seen, therefore, to resolve itself into one of a new departure,—a departure felt to reside in that same evolution which brought the specialty into being. Should dental schools resolve themselves into full medical colleges? or will it be that the demand shall be met by the establishment of special hospital advantages in connection with the already matured medical institutions?

To one intimately acquainted with the classes of professors connected with the two orders of schools, these queries are not so easy of answer as they would seem to be to him who knows alone either side. Dental colleges are as young men overflowing with the vigor of fresh life. It is a mistake to think these incompetent to the task; it is only that they delay on the Cisalpine side of the Rubicon; once in, they will hardly stop short of Rome. Medical schools, on the contrary, hesitate because they doubt the humor and intentions of the men they would gladly receive into the order of their alumni: they do not fully recognize the stature to which the confrère has developed.

A specialist cannot, and should not, be received into the common brotherhood of medicine without his coming to a common platform as regards all that makes the doctor. The ophthalmic surgeon has recognized this; and to-day he occupies just such a position as it is desirable to enjoy,—he has his special hospitals, but he has no college, no peculiar diploma. His general education is alike with his medical brethren; his privileges are the same.

The writer may here stop. Further than presenting these brief data, he does not feel at liberty to intrude on the pages of this journal. He has desired simply to suggest the consideration of the subject to those who are intending to become oral surgeons, and, as well, to those who are to decide the questions as to how oral surgeons are to be educated. Shall such decision be rendered first by a medical or by a dental school? Will the ranks of oral surgery be filled by those who are to-day physicians, or will the matriculants come from among those who now are at the head of the dental specialty? Come from somewhere they surely must, and will: evolution, like revolution, never goes backwards.

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PROCEEDINGS OF SOCIETIES.

AMERICAN PUBLIC HEALTH ASSOCIATION—THIRD ANNUAL MEETING.

SECOND DAY—MORNING SESSION.

THE proceedings were opened by the reading of a paper by Dr. Ezra M. Hunt “*Upon Building-Ground in its Relations to Health and Disease.*”

After going over the various causes of insalubrity dependent upon covering of the surface of the ground by buildings, resulting in increase of ground-water,

defective aeration of sub-structures, etc., the author recommended more perfect systems of drainage as distinct from sewage systems in our city.

At the conclusion of the paper, Dr. Ray, of this city, remarked upon the exceedingly flimsy construction of sewers and drains in Philadelphia. Made of but one thickness of brick, and that porous, and cemented together by mortar containing a large proportion of sand, it was a natural result that the sewage should soak through and permeate the ground in every direction. So wretched, indeed, was often the construction of these sewers, that he had known instances where they had actually fallen in before the workmen had left the ground.

Further remarks upon the subject of drainage and disposal of sewage were made by Drs. Bell and Morris, of New York, and Mr. Warner, of New Haven.

Dr. Stewart, of the Board of Health of Baltimore, gave a sketch of the present condition of affairs in that city as regards the disposal of sewage. Baltimore, Dr. Stewart remarked, is honeycombed with privies; the sanitary arrangements are not good. Many privy-wells are dug forty feet deep in the cellars of the various houses, and are not intended to be cleansed, and the fecal matter is disseminated through the soil, and becomes a fruitful source of typhoid fever.

Mr. Winans has arranged a system of air-tight tanks to be used in certain model tenement-houses which he has built. These are removed, when filled, to some locality outside of the city limits, and then emptied. In Washington, old oil-tanks are used in a similar manner. It is proposed to build a complete system of sewers for Baltimore, the expense to be met by the issue of sewer-bonds; each householder to pay for the privilege of tapping the street-main, as is now done as regards the water-supply.

Dr. Hartshorne followed with some remarks on the unhealthfulness of watering-places, which, owing to defective sanitary arrangements, often become the causes of death to the invalids seeking them.

Dr. S. C. Busey, of Washington, then read a "*Report upon the Gathering, Packing, and Transportation of Fresh Vegetables and Fruits, Competent Inspection, and Free Markets for Producers.*"

The Association then proceeded to the election of members and the transaction of routine business.

AFTERNOON SESSION.

Dr. E. Harris, of New York, presented a "*Report upon the Sanitary Government, Vital Statistics, and Methods of Public Health Administration in the Cities and Large Towns of North America.*"

This report, he remarked, was so occupied by detailed statistics that he would not weary the Association by reading it, but would suggest that it should be referred, as the other papers had been, to the executive committee.

Dr. J. M. Toner, of Washington, D.C., then read a paper entitled "*Notes on some Conditions and Accidents which Endanger, Limit, or Prevent Vaccination from giving Full Protection against Smallpox.*"

Dr. Toner remarked that what he had to say would be of a very practical character, and might seem trite, particularly to those physicians who had devoted themselves to the study of public health. Nevertheless, the fact of the revival of smallpox from time to time in an almost epidemic form is a sufficient cause to claim attention, especially when it occurs, as it does occasionally, in those who had supposed themselves to be protected by vaccination.

Some of the conditions which prevent people from gaining almost complete exemption from smallpox are wholly public in their character, and exist outside of and beyond the control of the physician in civil prac-

tice. These are, want of proper appreciation by numbers of people of the safety, utility, and sufficiency of vaccination, and of their own danger; the negligence of some who appreciate the value of the practice, and the utter recklessness of others.

The remedy of most of the evil that rests with the public must be sought through a judicious system of universal vaccination and re-vaccination enforced by law, under a skilful physician employed for the purpose.

There are also defects in the practice of vaccination as at present conducted, but they are of a character to be remedied, corrected, or prevented. Some of these depend upon the condition, age, and habits of the patient; others grow out of the care taken by or of the individual after the virus is introduced; and still others relate to the genuineness of the virus itself, its freshness, its proper introduction, and its security against interference through every stage of its development and decline.

Dr. Toner went on to speak of the various accidents which might interfere with the operation of vaccination and its results, and urged strongly the necessity of practical and special training for public vaccinators. It is of the highest importance that the virus should be fresh and perfectly pure. Of course, nothing could be better than the virus from the animal itself; but the speaker thought that conclusive proof is wanting of the deterioration either in the activity or protective quality of the humanized vaccine lymph, when selected with care, introduced with judgment, and properly guarded from accident.

He then detailed the method of vaccination which he believed the most effectual, advocating especially the use of a sufficient quantity of lymph or crust, and its introduction at two separate points. Failure to induce vaccination was, he remarked, more frequently because of the virus used, or want of skill in the operator, than of insusceptibility of the individual. In the United States the difficulty lies more probably in the insufficient quantity of virus used, rather than in its defective quality. Carelessness on the part of the vaccinators, and the almost exclusive use of the crusts instead of lymph, may also be cited as among the leading factors in the cause of failure.

Dr. Toner does not believe there is any danger of communicating other diseases with the vaccine disease. Marsden, who has vaccinated over fifty thousand individuals, has never observed an instance. Spurious vaccination may occur when the best lymph is used, and may vitiate the results of the operation. Dr. Toner concluded his paper with some practical directions as to the proper method of vaccination.

Dr. Moreau Morris said that several points had occurred to him while Dr. Toner was reading his paper, which he had jotted down, and would read. First, in regard to the frequent failures of vaccination. He had had a good deal of experience in the operation, and believed the cause of failure usually to lie in the imperfection of the virus, or in an improper method of operating. It is not unusual for a practitioner who wishes to vaccinate a patient, to ask his nearest neighbor for some virus. An old crust is produced, or a quill or two which has been kept for an indefinite period, and this is used.

Having had charge of the public vaccination during the late smallpox epidemic in New York, Dr. Morris was surprised at the amount of ignorance and carelessness manifested by many who performed the operation. Some would take an ordinary lancet and make several scarifications from one-eighth to one-ninth of an inch deep, causing considerable bleeding. Then a quill would be rubbed over the surface, and that would be called "vaccination." Of course, under these circumstances, it would rarely "take." Others would

scarify the surface superficially,—an equally useless proceeding. To show the perfectly protective character of proper vaccination, he might mention his own experience in New York, where, in two hundred thousand cases of vaccination of which a record was kept, no cases of smallpox occurred subsequently.

As to the use of humanized or bovine lymph, he was satisfied that the former was equally efficacious with the latter. The lymph, however, must be fresh, and kept at a proper temperature to avoid decomposition.

As regards the number of points at which the virus should be introduced, Dr. Morris agreed with Dr. Toner in thinking that it should be done in several distinct localities for security, though a single good inoculation is sufficient. One point Dr. Toner had not brought out,—the necessity that the system should be saturated with the virus.

Dr. Morris, as a rule, repeated the vaccination on the eighth day; often, when the first vaccination has seemed successful, the re-vaccination has run its course. He mentioned in this connection the case of a person who was peculiarly exposed, and who was vaccinated successfully three successive times. Among the causes of the non-success of vaccination he had found the use of dirty lancets and imperfect inspection by the physician, who too often is satisfied with the statement of the patient or friends that it "took."

Constant inspection on the part of the physician is alone satisfactory. As to the material used, good crusts would answer, but he would prefer lymph. In conclusion, Dr. Morris said that a course on vaccination should be a part of the education of every medical student. Vaccination is an art, and cannot be picked up.

Dr. Edwin M. Snow, of Providence, Rhode Island, then read a paper upon the question, "*Does Smallpox become Epidemic, or is it spread solely by its own Contagious Property?*" Dr. Snow said that the phrase "epidemic smallpox" is common in writings upon medical and sanitary subjects. Whenever that disease is prevalent in any place it is freely and generally spoken of as "epidemic," without, apparently, any very definite idea of what is meant by the word.

We have all seen times when the smallpox seemed to spread more rapidly and more easily than at other times, and when vaccination seemed to "take" more readily. But does this condition of things, when it exists, depend upon any epidemic influence of the smallpox-poison? In other words, can smallpox become epidemic? Dr. Snow thought not. Taking as a basis the Fourth Annual Report of the Massachusetts State Board of Health for the year 1872, we find that although it is there stated that a wide-spread epidemic influence of smallpox-poison prevailed, yet, in fact, there was no marked prevalence of the disease at that time in this country, except in Boston and in a few Western cities. As this is simply a question of fact, he might quote a few figures. In the thirteen months including 1872 and the first part of 1873, notwithstanding this so-called epidemic influence of smallpox, there were of 342 towns in Massachusetts 145 where not a single case of the disease, modified or unmodified, occurred. In only 86 towns of 342 were there more than five cases of smallpox or varioloid during that time. Certainly we cannot be expected to believe that an epidemic of smallpox such as the report so vividly describes existed in any town that had less than five cases of smallpox or varioloid in thirteen months.

After giving further statistics, obtained from this report, to the same effect, Dr. Snow continued as follows: Was this, then, an epidemic influence, or can it be explained more rationally in some other way? We understand by an epidemic influence some cause of disease which is wide-spread in its effects upon the

people, which is independent of the ordinary or sporadic causes of disease, and which in itself and by itself has some power towards producing disease. Thus, for an illustration, when Asiatic cholera is truly epidemic there is wide-spread over the country an influence which of itself tends to produce cholera, and which, in connection with local causes, does produce it, and without which the cholera cannot exist, even though all the local causes may be present. Can we conceive of any such influence in connection with smallpox? any influence that can be correctly called epidemic? We all acknowledge smallpox to be contagious, and, so far as we know, no case of the disease ever occurs at the present day without contagion, either direct or indirect. There may be causes, like cold, which preserve the contagious virus and make it more active; and there may be causes, like heat, which tend to weaken and destroy its power; but we can conceive of no cause that will have the slightest tendency to produce a case of smallpox without contagion.

Let us consider for a moment what a case of smallpox is. Each case, from its beginning to its close, is a living manufactory, in active operation, of virulent contagious poison. Every part of the body, yes, every pore of the body, exhales this poison; every secretion of the body is saturated with it. It is manufactured in the skin at first in a liquid form, and then dries up, and is preserved in quantities sufficient in each ordinary case of smallpox to give the disease to millions of persons. All the clothing, bedding, and furniture of the sick-chamber are infected with the poison, and give it forth into the atmosphere every time they are moved. More than this, every person sick with smallpox is breathing forth volumes of the contagion with every respiration. Thus the six hundred thousand cubic inches of atmospheric air that each patient inhales each day come forth from his lungs changed into a virulent contagious poison.

It seems to me that the interests of sanitary science require us to repudiate the idea that the prevalence of smallpox may depend upon any mysterious influence called epidemic. The language itself is inconsistent and absurd. Smallpox is the result of a specific poison applied to the human body through the skin or through the lungs, and producing definite specific effects. The vaccination-disease is the result of a specific poison applied to the human body through the skin, and producing definite specific effects. Both the vaccine disease and smallpox are frequently prevalent in our cities to a greater or less extent; the vaccine disease much more so than the smallpox. May we not as well speak of the epidemic influence of the vaccine poison as of the epidemic influence of the smallpox-poison? We do not need the theory of "epidemic influence" to account for the prevalence of smallpox in any place; nor can we agree that such a theory is any valid excuse for such a prevalence of the disease. In this assembly, certainly, the doctrine is established that smallpox is propagated by contagion, and that we have in vaccination an almost absolutely perfect preventive of it. Whatever, then, may be our views in regard to epidemic influence, as sanitarians we must all agree, with reference to any and to all cities and communities, that the prevalence or the absence of smallpox will always be in exact ratio to the neglect or the observance of sanitary measures, including vaccination, by the authorities and by the people.

Dr. Hartshorne agreed with Dr. Snow in most of his views: there seemed, however, occasionally to exist an atmospheric saturation, or a rapid multiplication of morbid matter. A certain periodicity or alternation from generation to generation of susceptibility has been suggested, and seems possible.

Dr. Snow asked if it were likely this number of cases could exist if they had been vaccinated.

Dr. Hartshorne said he thought the average amount of vaccination from year to year was about the same.

Dr. Woodward differed from Dr. Hartshorne, and thought that while vaccination might be largely practised during and immediately subsequent to the general prevalence of the disease, yet a few years afterwards it would be performed to a much less extent.

Dr. Morris remarked, in answer to a suggestion of Dr. Hartshorne that some unvaccinated escaped, that these were probably not exposed.

Dr. Hartshorne disclaimed any intention of making light of vaccination.

Dr. Morris said that the idea of epidemic smallpox was as absurd as that of epidemic vaccinia. A smallpox-hospital under his care during the late prevalence of the disease in New York gained the credit—though isolated and in a suburb—of spreading the affection in the neighborhood. On close investigation, however, it was found that a person was in the habit of buying the clothes of those who died, which garments being cut up into rags were made into carpets in the village, and thus acted as carriers of the contagion.

A conference upon the subject of *Hospital Construction and Management* was then announced. Dr. Kirkbride, being called upon to open the discussion, said that he had come rather to receive than to impart information on the subject.

He had supposed that the questions of the construction of hospitals and of heating and ventilation were settled. We are now told that temporary hospitals are the best. His opinion, however, was different, and he believed that permanent hospital-buildings offered the best advantages.

Dr. Kirkbride then went on to speak of what he believed the proper mode of construction. After speaking of the importance of a good cellar, etc., he said that he thought the question of ventilation ought to have been settled by this time. Heat was necessary; no ventilation is perfect without the use of a fan. At that season of the year when ventilation was most needed windows were of no use. Forced ventilation is as necessary in summer as in winter. This method had been in use for a long time in the institution with which he was connected, and they were so well satisfied with it, that should they erect new buildings they should be arranged in the same manner. The best-managed hospital, he concluded, is always the cheapest.

Dr. I. M. Woodworth, Supervising Surgeon U. S. Marine Hospital Service, read an abstract of his last report "*On Hospitals and Hospital Construction.*" The hospitals built by him had been on the barrack plan. A hospital should be well situated, simple in construction, and one story high. The administration buildings alone should be permanent. The pavilions should be placed north and south, and at a distance apart equal to double their height. Though one story permits better ventilation, yet two-story buildings are allowable. Each patient should be allowed eighteen hundred cubic feet of space. Bath-rooms and water-closets should be entirely separate from the wards, and the latter should be ventilated by a large pipe running to the top of the building. The ward floors should be made of compact wood, the joints being filled in with white lead, and paraffine oil or beeswax should be used over the surface.

Washing the floor while patients are in the ward should not be permitted. The wall should be covered with lime-and-sand plaster, well painted, and frequently washed with soap and water; or it should be white-washed, and scraped at short intervals. Open grates should be employed, whatever other means of ventilation be used. All drains should be well ventilated by pipes passing to the top of the building.

One executive head, well paid, should direct the whole management.

Dr. Ray said his experience went back over a period of thirty-five years. It used to be considered that doors and windows allowed sufficient ventilation. That idea gradually became superseded by the more enlightened opinions of the present day. Forced ventilation was, in his opinion, what is required.

He regretted to hear Dr. Woodworth recommend oiled floors. Oil absorbs dirt, and his experience was adverse to the use of floors such as Dr. Woodworth had spoken about. He thought that washing a floor thoroughly once in two weeks would keep it clean.

Dr. Woodworth explained that he meant boiled linseed oil, which afforded a hard surface.

Dr. Ray in reply said that oiled floors would not shed dirt; all that he had ever seen had been always dull and dirty.

Dr. Ashhurst agreed with Dr. Kirkbride in regarding the objections to permanent hospitals as unfounded. Although from experience he could speak favorably of pavilion wards in military practice, yet in civil hospitals they had the disadvantage of being difficult to administer and requiring more attendants than could be afforded.

As regards the statistics of hospitalism, nothing was more difficult than to compare two institutions together which were not only in different localities and differently managed, but where different operations might be performed for the same injury. The character of the patients, too, would have to be taken into account. In army hospitals during the war, for instance, the men were generally healthy and supported by the morale of continued victory. It would be obviously unfair to compare the statistics of these hospitals with those of municipal hospitals filled with the dregs of the population.

Our hospitals are not perfect, but they are far from being the slaughter-houses some have represented them to be. No surgeon would willingly treat severe injuries in the homes of our poorer population, and the choice must lie between these and the hospital. Dr. Ashhurst was glad to see such unanimity of ideas as regards the essentials of hospital construction. One-story hospitals are theoretically better, but they take up too much room.

Dr. Woodworth, he was glad to observe, admitted that two-story hospitals were proper. Our city hospitals usually have three stories, but the upper one is generally held in reserve. As to the question of permanent or temporary hospitals, he believed the permanent plan the best.

Dr. Billings agreed with Dr. Ashhurst that the differences of opinion on this question were more apparent than real. What is wanted is sufficient dilution of the effete air. In old times eight hundred cubic feet used to be allowed to every patient in a hospital, but now the allowance has risen to twenty-five hundred feet, and some even recommend thirty-five hundred feet per hour; though, indeed, others think that three hundred feet per hour is enough. A municipal hospital should have a resident medical superintendent. The staff will not take care of hygienic matters.

Dr. Harvey Brown's "*Report upon Yellow Fever on the Dry Tortugas*" was referred to the executive committee, as was also Dr. Rodenstein's "*Notes upon the Causation of Scarlatina, etc.*"

Dr. Benjamin C. Miller then read a "*Report upon the Methods of Treatment of Gases from Rendering-Tanks, and the Disposal of Tank Offal.*"

At the evening session discourses were delivered by General E. L. Viele, of New York, on "*Principles and Practice in Drainage and Sewerage in Connection with Water-Supplies,*" followed by a discourse by Prof. Edward Orton, of Ohio, entitled "*Certain Relations of Geology to the Water-Supplies of the Country.*"

THIRD DAY—MORNING SESSION.

After disposing of a certain amount of business, election of officers, etc., Dr. Stephen Smith, the President of the Association, read a paper "*Upon the Reciprocal Relations of the Public Health Service, and the Highest Educational Qualifications of the Medical Profession.*" After giving a general sketch of the condition and status of the medical profession at different periods of the world's history, the speaker referred to the present position of the profession in this country, where, according to law, "*the term physician may be applied to any one who publicly announces himself to be a practitioner of this art, and undertakes to treat the sick either for or without reward.*"

To the Public Health Service we must look for the first advance in the future, and when the needed reforms in medicine are effected it will take its proper rank in society and in the state. Purified, elevated, it will again be regarded, in its power to prevent and cure disease, as a divine art.

Dr. Sturgis, of New York, then read a paper entitled "*How does Syphilis affect the Public Health?*" He had divided the subject into three heads:

1. Is syphilis of common occurrence?
2. Can it be considered a disease fatal to life?
3. Does it favor the development or fatally influence the course of other diseases?

The statistics examined embraced only cases of syphilis properly so called, and did not include gonorrhoea or "chancroid." The facts were obtained from the reports of the Armies and Navies of Great Britain and the United States, the reports of the mercantile marine of the latter, the sum total of poor patients treated during the year 1873 at the various hospitals and dispensaries of New York City, etc.

In the U. S. Army, the statistics of mean strength from 1840 to 1859 show a percentage of 1.1 cases of syphilis. For the five years from 1870 to September, 1874, inclusive, the percentage of syphilis in the Department of the East was 4.61.

The report of the mercantile marine for the United States for 1872 and 1873 gives 15.33 per cent. as the proportion of syphilitic to other diseases.

The report of the mercantile marine of New York City from January, 1871, to October, 1874, gives the percentage of syphilitic to other cases treated as 16.19.

Reports of the British Army for 1869, 1870, and 1871 show the percentage of syphilitic cases as 7.6 of the entire force.

The statistics of the Naval Hospital of Brooklyn for the years 1870 to 1874 show that 8.59 per cent. of all cases treated were syphilitic.

The percentage of syphilis among the poor of New York, as shown by reports of hospitals and dispensaries, is 1.5 per cent. of all cases treated. The defective registration of patients is so prevalent that this figure is probably too low.

The English reports of Mr. Wagstaffe show that in London nearly seven per cent. of all the poor who receive medical relief are affected by syphilis.

The figures of M. Lecour show that in Paris the condition of affairs is about the same; and these statistics, as a whole, indefinite and variable as they are, are presented with a view of showing that the disease is probably widely spread.

In regard to the second question, whether syphilis can be regarded as the cause of a large number of deaths, Dr. Sturgis thought it could not.

Statistics were collected from the leading London hospitals, from the Charity Hospital, New York, and from various other sources, and with a result likely to prove surprising to those who regard acquired syphilis as a fatal disease. At St. Bartholomew's, during the

twelve years from 1860 to 1871 inclusive, one per cent. of all the syphilitic cases treated died.

At St. Thomas's, for six years (1866 to 1871 inclusive), four per cent. of all syphilitic cases under treatment died.

At St. George's, for five years (1866 to 1870 inclusive), 1.5 per cent. terminated fatally. At the London, during three years a little over three per cent. died. At the Charity Hospital, Blackwell's Island, during four years a little over .3 of one per cent. died.

These figures comprise only the secondary and tertiary forms; primary and congenital syphilis are not included. The immediate causes of death were ascertained in sixteen of these cases, and it would be difficult to ascribe them all to syphilis, except indirectly. It should be noted that in all the cases of death the end was accelerated, if not caused, by diseases which are in themselves serious, perhaps actually fatal, apart from any consideration of syphilis. Turning to the mortuary record of cities, we find in London in 1871 the percentage of deaths from syphilis to the total number, .8. In New York, for 1871, percentage of deaths from syphilis to total number, 1. Philadelphia, 1871, percentage of deaths from syphilis to total number, .2.

In face of these figures, would it be fair to consider syphilis as a fatal disease? Decidedly not.

As regards congenital syphilis, the case is different.

In London (1871), the percentage of deaths under five years to the total deaths from syphilis was over eighty-nine; in New York, over eighty-four; in Philadelphia, over sixty-three: truly, a wholesale massacre of the innocents. Large as these figures seem, they are borne out by the statistics of other countries. During recent years, the percentage of mortality from syphilis has apparently increased, probably on account of more accurate registration.

The effects of syphilis are serious enough; but Dr. Sturgis most earnestly protested against exaggerating them. The danger to the public health from syphilis lies not so much to those who acquire the disease as to those who inherit it.

As to the third question,—Does syphilis favor the development, or does it fatally influence the course, of other diseases?—Dr. Sturgis brought forward much carefully-prepared statistical matter, as well as details of cases coming under his own observation.

In summing up his communication, Dr. Sturgis stated the following conclusions:

1. Syphilis is probably widely spread, possibly increasing in extent. This opinion, from the imperfect means at our disposal, must, for the present at least, remain more or less as conjecture.

2. The question of the fatality, so far as the acquired forms of the disease go, may be answered in the negative; but its excessive mortality in the congenital variety renders it serious and alarming. One cause of consolation remains, however,—i.e., that the disease does not probably extend to the third or fourth generation, usually dying out with the second; nor does it transmit any specially vitiated vitality to the posterity of the original sufferer.

3. In the third proposition the same condition is found, viz., the comparative harmlessness of acquired and the fatality of congenital syphilis over the course and development of other diseases.

The danger to the public health lies more in the transmitted than in the acquired disease, and whether it be permanent and dangerous or only temporary and remediable must remain for future investigation to show.

Dr. Sturgis closed his admirable paper by a suggestion for the better registration of this kind of cases and for more trustworthy observation, quoting the recommendations of the International Statistical Congress held at St. Petersburg in 1872, at length.

Dr. Sturgis's paper was succeeded by the following :

A paper upon "*Hay Fever or Summer Catarrh*:" Original Researches upon the Geographical, Topographical, and other Etiological Characteristics of this Malady, with reference to its Causation and Prevention. By George M. Beard, M.D., New York.

A paper upon the "*Influence of the High Altitudes and Climate of the Table-land Country of the Rocky Mountain Region upon Health and Disease*." By B. E. Fryer, M.D., Surgeon U.S.A.

"*Abstract of Special Reports by Army Medical Officers on the Effect of Mountain Climates upon Health*." Presented by J. S. Billings, M.D., Assistant-Surgeon U.S.A.

"*Certain Perils of the School-Room which demand the Attention of Educational and Sanitary Authorities*." By A. N. Bell, M.D., Brooklyn, New York.

A paper upon the "*Stealthy Introduction and Spread of Infectious Diseases in Large Cities*." By John C. Peters, M.D., New York.

A paper upon "*Suicide in Large Cities with Reference to certain Sanitary Conditions which tend to prevent its Moral and Physical Causes*." By Allan McLane Hamilton, M.D., New York.

After the reading of these papers a sanitary conference was held, at which the comparative merits of water-closets and privy-vaults were discussed, after which the Association adjourned to the evening session, which was held at Horticultural Hall.

At this session discourses were delivered by Hon. Dorman B. Eaton, of Washington, on "*Health Laws and the Interests and Obligations of the State and National Governments pertaining to them*;" and by Hon. L. H. Steiner, M.D., of Maryland, on "*Health a Prerequisite of National Success in Peace and in War*."

Short addresses were also made by Rev. Dr. Beadle and Dr. Agnew. On motion of Dr. Gross, the thanks of the Association were tendered to the gentlemen who had delivered discourses, and the Association adjourned.

The meetings of the Association were, on account of pressure of business, prolonged over Friday morning, at which time Prof. Maisch's paper upon "*Sanitary Relations of Pharmacy and the Materia Medica*" was read.

Prof. Maisch, after speaking of the importance of pharmacy to the general welfare, and of the vast amount of adulterated drugs formerly supplied to the American market and still supplied to a considerable extent, went on to allude to the various "formulæ" and special preparations now so much in vogue, and which are often inert or harmful.

In the way of remedy for these acknowledged evils, he suggested that the medical profession recognize the want of household remedies by publishing authoritative formulæ for the use of pharmacists, who may compound them at their counters and keep them on hand for the ready and convenient supply of all the real wants of families and of individuals in this direction. Such a measure would go far towards abolishing a large number of nostrums; but it would be advisable not to neglect the direct instruction of the public, by publishing tracts on sanitary subjects, by the delivery of popular lectures, and by instructing the rising generation in the means of preserving the health and in the dangers of the injudicious use of all drugs.

An aid to this would be an almanac gotten up by some competent authorities under the auspices of an enterprising publisher, and which should contain hygienic rules, first help in accidents, antidotes for poisons, etc. Such a publication might be paid for by advertisements, and would be likely to do much good.

Prof. Maisch concluded by stating that the most

effectual method of securing all the advantages of American pharmacy to public health would be to insure the proper qualifications of the pharmacists. This is one of the main purposes of the local Pharmaceutical Association, and of the national representative body of pharmacists. To accomplish this, among kindred objects, those societies have earnestly labored for years, and in their efforts deserve the support of all having the welfare and safety of the public at heart.

Prof. Gross then introduced resolutions relative to the establishment of a National Bureau of Health.

Among the various matters of business transacted on Friday morning may be mentioned the appointment of committees on the Use of Poisons and on National Sanitary Information, and also a special committee to devise a project of laws to meet the wants of the State Boards of Health.

The following officers were then elected for the ensuing year:

President, J. M. Toner, of Washington, D.C.

First Vice-President, E. M. Snow, of Rhode Island.

Second Vice-President, Prof. Henry Hartshorne, of Philadelphia.

Secretary, Elisha Harris, of New York.

Treasurer, John R. Rauch, of Illinois.

Executive Committee, J. S. Billings, U.S.A.; Stephen Smith, New York; Moreau Morris, New York; J. J. Woodward, U.S.A.; James A. Stewart, Baltimore, and A. N. Bell, New York.

The following resolutions were then presented by Dr. Hartshorne:

"*Resolved*, 1. That, for a city properly arranged and conducted, abattoirs, subject to municipal regulations, are always preferable to a number of private slaughter-houses.

"2. That the best practicable management of large abattoirs, with cattle- and hog-yards, cannot be depended upon at all times to prevent their drainage from contaminating water and the atmosphere in its vicinity.

"3. Therefore, such establishments should be located as far as practicable from the centres of population, and, if possible, upon tide-water."

The mover called upon Dr. Rauch, of Chicago, for information relative to his experience in the matter at Chicago. Dr. Rauch said that the many improvements made had done away, in a great measure, with the objectionable features of slaughter-houses; but, under certain conditions of the atmosphere, a whole section of the city would be pervaded with the disagreeable odor. He thought that, as a general thing, the drainage from abattoirs should not be allowed to enter a fresh-water stream, unless the current was very swift. In Chicago the value of property had always been greatly diminished by the establishment of abattoirs, for people kept at a respectful distance from them. He believed, however, it was possible to conduct abattoirs so as not to be injurious to the public health.

The resolutions offered by Dr. Hartshorne were, with some slight modifications, adopted. Dr. Goodwin then presented the following:

"*Resolved*, That this Association urge upon the Governors and Legislatures of each and every State in the Union the importance of enacting laws creating State Boards of Health and providing adequate measures for sanitary administration throughout each State.

"*Resolved*, That a copy of this resolution be forwarded to each Governor and Legislature, duly signed by the President and Secretary of the Public Health Association."

The subject was referred to the special Committee on Legislation.

The Association then adjourned, to meet in Baltimore on the second Tuesday in November, 1875.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

NOVEMBER 2, 1874.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

DR. J. H. MCQUILLEN, chairman of the committee having charge of the Semi-Annual Exhibition held the previous month, read his report, of which the following is an abstract:

"Mr. Director, and Gentlemen,—In presenting a report of the Microscopical Exhibition given under the auspices of the Section in the Academy, on Monday evening, October 5, 1874, it is but proper to state that it was proposed and agreed upon by the committee, that in the arrangement of the specimens they should be classified in such a manner as to give a comprehensive view of the subjects presented, by bringing objects related to one another under the same head; in this way adding not only to the interest of the exhibition, but also increasing thereby the opportunity of acquiring valuable information on the part of those who would be present. This plan was carried out as far as practicable, and the desired result obtained. The microscopes, forty in number, were arranged on tables in three rooms of the library. The principal, if not the only, drawback of the exhibition was the contracted space, and the impossibility of properly accommodating the large number of persons present.

"Dr. JOSEPH G. RICHARDSON showed the circulation of the blood through the tail of a so-called triton in Holman's siphon life-slide; also five other specimens of blood, among which human and sheep's blood were exhibited under Powell and Leland's dry, and Tolles' immersion one-fiftieth lenses, respectively. Accomplished as this was in a crowded room, where hundreds of persons were jostling against each other, it places beyond a question of doubt the possibility of making a similar demonstration in a crowded court-room, and of not merely satisfying, under such circumstances, the experienced microscopist, but in addition the most ignorant and obtuse jurymen. Made as this was for the first time in public on that occasion, it may be truly said that this demonstration, in connection with his previous valuable investigations in the same direction carried on in the seclusion of his private office, marks an era in medical jurisprudence.

"Dr. J. H. MCQUILLEN had under his care an ingenious class-microscope, loaned to him for the occasion by Prof. Oliver Wendell Holmes, who designed and partly constructed it, and who uses it along with several others in the lecture-room. It is so arranged that transparent or opaque objects can be shown by changing the position of the lamp. He also exhibited a section-cutter, designed by Dr. Edward Curtis, of New York, for making fine sections of soft tissues, and four beautiful sections of the eye, prepared by the same gentleman with this instrument, and kindly loaned by him.

"Dr. W. V. MCCLURE showed nine excellent sections of the eye, chiefly hæmatoxylin, carmine, and osmic-acid stainings of his own preparation, under Hartnack's lenses, from No. 2 up to No. 10, which latter is about a one-sixteenth immersion objective.

"Dr. GEORGE S. ALLEN, of New York, exhibited a specimen of borax by polarized light, using a Herepathite crystal half an inch in diameter, as an analyzer, giving perfect definition under the highest powers, with polarizing properties equal to the Nicols' prism. He also showed the Podura scale under a famous one-tenth immersion Tolles' objective, kindly loaned by Mr. Charles Stodder, of Boston.

"Dr. C. N. PIERCE displayed, among other objects, rotifera in active operation.

"Dr. R. S. KENDERDINE exhibited, for himself and Miss Gerty Bolles, Volvox globator, skin of the sole, and pollen of Hibiscus.

"Dr. C. S. BOKER had on exhibition Hyalodiscus nobilis.

"Dr. ISAAC NORRIS showed two varieties of Brown-ing's spectroscope, also a specimen of human lung injected, and arranged diatoms.

"Mr. WILLIAM H. WALMSLEY exhibited Müller's new typen-platte, a butterfly's wing, platino-cyanide of magnesium polarized on Crouch's binocular, and Pleuro-sigma angulatum on Queen's new student's microscope with a one-fifth objective.

"Dr. A. G. REED exhibited very successfully the circulation of blood in a triton under a four-tenths inch lens. This was shown on a circular revolving table, admirably adapted for microscopical purposes. He likewise displayed a very ornamental cabinet for microscopic slides, made of walnut, with boxwood trimmings, and sides of Hungarian ash.

"Dr. J. GIBBONS HUNT showed a number of beautiful botanical slides, double stainings, as follows: 1, common hop (lupulus), showing latex-vessels filled with green color, all other parts violet; 2, cystoliths in nettle (urtica), colored green, and showing filaments attaching them to the cell-wall, all other parts violet; 3, Lygodium palmatum spores and sporangia, all green color, other tissues violet; 4, Woodsia obtusa, theca and spores green; indusium, showing cell-contents; other parts violet. These structures presented every cell distinctly in natural relationship of parts, *without dissection*. The illumination of delicately-stained tissues, especially double stainings like these, by artificial light, is important. The light was concentrated parallel rays, passed through an achromatic bull's-eye lens of least spherical aberration, the best means of displaying such work by artificial light.

"Dr. CARL SEILER exhibited a number of beautiful micro-photographs of his own production; also, under sundry microscopes, fern from the stomach of a mastodon, spinal vessels, isolated and in position, transverse section of elephant's bone, and human liver.

"Drs. T. C. STELLWAGEN and E. L. HEWITT had under their care ten microscopes, with sections of bone and the teeth of man and animals, showing enamel, cementum, and dentine in various phases; the relations of these tissues being made evident to all by means of a papier-mâché model of a molar tooth, twenty times the natural size, the property of Dr. Stellwagen.

"Mr. CHARLES STODDER, of the Boston Optical Works, in compliance with an urgent invitation of the corresponding secretary, sent on a one-fiftieth immersion (elsewhere noticed), and a one-tenth immersion which has been pronounced a very valuable lens.

"Messrs. QUEEN & Co. showed four microscopes, the most remarkable being one of Beck's large best binoculars, made of aluminum, the lightest of its size ever produced, and yet so well balanced as to be entirely firm.

"Mr. JOSEPH ZENTMAYER displayed three microscopes, viz., student's, grand stand, and binocular, the workmanship and execution of which were of the most perfect character."

Dr. J. GIBBONS HUNT commented upon the report, especially dissenting from the commendation bestowed upon the performances of the one-fiftieth objectives of Powell and Leland, and of Tolles, and also from the favorable notice given to the Tolles' one-tenth immersion, which, he stated, was probably in reality only a one-eighth lens, inferior in power to Beck's one-tenth.

Dr. JOSEPH G. RICHARDSON read a paper entitled "Notes on the Performances of Two One-Fiftieth Objec-

tives" (see p. 132), which was referred to a committee composed of Drs. J. G. Hunt, I. Norris, and J. Tyson.

Dr. JAMES TYSON remarked that whilst it was certain that the difference in size of the corpuscles of human and sheep's blood then exhibited on the table under the two fiftieths by Dr. Richardson was quite perceptible, yet so different did the red blood-disks appear beneath these objectives from what they did under the powers he had ordinarily used, that he would hardly be willing to say that they were blood-corpuscles, if he were ignorant of their true nature.

Dr. RICHARDSON said that in these specimens, only this very difference in size was intended to be shown; the problem he had set himself to solve in *this particular instance* being whether among corpuscles known to be those of blood (by the revelations of moderate powers of the microscope, aided by chemical tests for example), we could make a differential diagnosis by the size alone between those of man and those of the sheep.

Dr. J. GIBBONS HUNT observed that, putting aside the acrobatic feats of the one-fiftieth in the resolution of diatoms by very oblique light, he had yet to see any good definition by it upon an object axially illuminated. As displayed before him, he thought that the two one-fiftieth objectives showed conclusively that no gain in real histological work is secured by using lenses of high power, which afford such imperfect definition, and are by no means achromatic.

Dr. J. H. MCQUILLEN stated that he had purposely avoided expressing any opinion in regard to the one-fiftieth, as Dr. Richardson had prepared a paper upon its qualities. With respect to the objections which have been advanced, that spherical and chromatic aberration had not been entirely corrected, the question arose, If this be true, is the instrument therefore useless? The fact that with it, and the one-fiftieth of Powell and Leland, the difference in size between the blood-corpuscle of man and the sheep was defined in the presence of a crowded audience, in the most unmistakable manner, indicates that it is not *useless* but *useful*. It must not be forgotten that Sir Isaac Newton long ago asserted that it was impossible to construct an achromatic telescope or microscope; and yet, with the imperfect instruments used prior to and during his time, important and valuable discoveries were made by astronomers and microscopists; some of which, observers with the improved instruments of our own day have only confirmed. It was, he believed, assuming too much to say that the one-fiftieth could not be used to advantage in histological investigations. By its aid, in the not far distant future, important and valuable discoveries might possibly be made.

Dr. HUNT granted that the difference in size of the two kinds of blood-corpuscles shown upon the table under an amplification of twenty-five hundred diameters was sufficiently demonstrated, and that therefore it was obvious that high magnifying power had been obtained; the difficulty which we now needed to have overcome was bad definition. As yet spherical and achromatic aberration were not, in his opinion, fully corrected in these high objectives, although opticians were trying to sell them as being perfected. Indeed, no perfectly achromatic lens has so far ever been constructed, so that Sir Isaac Newton's prophecy still holds good up to the present day.

Dr. RICHARDSON desired in this connection to call particular attention to the statement in his paper, that the longitudinal lines of *Surirella gemma* were clearly visible under the one-fiftieth, because with his scanty knowledge of the tricks of illumination by oblique light he could only bring them rather imperfectly into view with the Tolles' one-tenth, which had been pronounced by high American and English authorities—

such as Col. Woodward and Mr. Wenham—a superior lens.

Dr. HUNT reminded the members that these lines and those of other difficult diatoms could all be resolved, by even lower powers, with perfect ease.

Dr. RICHARDSON replied that this easy resolution of difficult diatoms under low powers certainly required a greater skill in the management of the light than he possessed, since he had completely failed in repeated attempts; and yet, with exactly the same ignorance of these ingenious artifices as stated above, he brought the fine lines (of which he had almost begun to doubt the existence) clearly and sharply into view at the first trial by monochromatic sunlight with Tolles' immersion fiftieth. Moreover, he felt sure that any unprejudiced microscopist would perceive that a lens which was capable of showing the finest markings on the Diatomaceæ as distinct lines or dots must be similarly capable of showing analogous delicate lines and dots in the cells, fibres, and membranes of human and animal tissues; and since these lines and dots *make up absolutely all that we know of the morphological characters of histological elements*, lenses which, like the one-twenty-fifth and one-fiftieth, show finer markings, will almost necessarily prove of greater practical value in histological research.*

REVIEWS AND BOOK NOTICES.

A GUIDE TO THE PRACTICAL EXAMINATION OF THE URINE, FOR THE USE OF PHYSICIANS AND STUDENTS. By JAMES TYSON, M.D., Hospital Lecturer on Pathological Anatomy in the University of Pennsylvania; one of the Physicians and Pathologist to the Philadelphia Hospital, etc., etc. Pp. 182. Lindsay & Blakiston, Philadelphia, 1875.

Almost every one of our seventy thousand practitioners of medicine feels at times the want of a reliable guide to the more complete examination of the renal secretion in cases of doubt and difficulty; and since this book admirably meets just such a universal necessity, we are convinced it will find a multitude of readers in all ranks of the profession. Being a larger and more exhaustive work than those of Flint and Wickham Legg on the one hand, and, notwithstanding it sets forth the valuable German methods of approximative and exact quantitative analysis, less cumbrous or expensive than those of Beale, Roberts, Harley, etc., on the other, we welcome it as an important aid towards wider cultivation of the true science of medicine by facilitating accurate investigations of the urine even among busy physicians in general practice.

Dr. Tyson commences with a short account of the theory of renal secretion, the physical and chemical characters of the urine, and the reagents and apparatus used in its analysis. Excellent rules are then given for detecting the presence of albumen, sugar, coloring-matters, bile, urea, uric acid, chlorides, phosphates, and sulphates; and minute instructions for approximative and quantitative determination of most of those ingredients by volumetric analysis are supplied.

*It is well known that some cases occur where a diagnosis between cancer-cells and the cells of vesical epithelium would be important, and this, if ever accomplished, will, perhaps, be made by the discovery of some finer markings upon one or the other morphological elements than have yet been described,—the process being comparable to that by which we would distinguish between twin brothers at the distance of say one thousand feet, when by a telescope of moderate power we might recognize the outlines of their features and guess which was Castor and which Pollux, but with a very powerful optical instrument—the analogue of a one-fiftieth objective—which would *define delicate lines*, we might count the eyelashes of each, and, on a previously known difference in their number, base an accurate differential diagnosis.

The subject of urinary deposits is carefully treated of in the remaining seventy pages of the volume, being illustrated by a plate and numerous wood-cuts representing the microscopic characters of various crystalline sediments, and also the organized constituents, such as mucus, pus, and blood; a proportionately large space being duly allotted to the important subject of tube-casts in Bright's disease. A few pages upon the differential diagnosis of the forms of albuminuria are added, and constitute, in our opinion, the most admirable, as well as the most practically useful, chapter in the entire book.

About half the wood-cuts—thirty, or rather twenty-nine in number, since Fig. 14 only differs numerically from Fig. 10—are given as original, and the remainder have been well selected from the works of Harley and others. In our opinion their value would have been much increased had those representing microscopical appearances been furnished, as is always done by Dr. Beale, with a statement of the magnifying power under which they were drawn.

The author's style is generally perspicuous; concise, definite, and easily comprehensible statements being usually made in regard to the subjects treated of, although occasional infelicities of diction occur. For example, we should prefer an Anglicized version of the following, on p. 21: "Requiring an acid urine to keep them (earthy phosphates) in solution, a diminution of the degree of this may result in their precipitation, which is further increased by an alkaline reaction."

The lithographic plate, exhibiting very accurately the usual appearances of the so-called pigment-flakes, or pigmentary particles, has a peculiar interest, and will doubtless prove very useful in explaining one of their common puzzles to students, as well as in preventing them from falling into the lamentable yet ludicrous blunder of Dr. Roberts and others in regard to these microscopic dirt-pits upon the glass slides.

The Table of Contents is omitted, and obvious misprints occur on pages 28, 48, 92, 146, and 162, but the book as a whole is remarkably free from typographical errors, and shows the results of that faithful and painstaking carefulness which so eminently characterizes its learned author.

In paper, press-work, and binding, the volume will well sustain the high reputation of the distinguished medical-book publishers whose imprint it bears.

J. G. R.

GLEANINGS FROM OUR EXCHANGES.

OCCIPITO-POSTERIOR POSITIONS OF THE HEAD (*The Edinburgh Medical Journal*, October, 1874).—Dr. Angus Macdonald, as the result of an analysis of twenty-six operative cases, has arrived at the following conclusions:

1. In occipito-posterior positions, if these are persistent, we may safely assume that we have some pelvic peculiarity or disproportionately large head to deal with, and, as a general rule, all attempts at artificial rectification of the position of the head will prove abortive, and are even dangerous if attempted to be effected by means of levers, forceps, etc.

2. The only exception is when temporary delay is occasioned from accidental displacement of a small head; in which case one has the alternative of waiting till the normal powers of parturition effect delivery, or of facilitating that event by timely rectification of the head by the hand.

3. In cases which threaten to end as "face to pubes," and are at the same time decidedly difficult, it is best to pull the head through cautiously, and to abstain from every attempt at rectification of the head,—special

care being taken to guard the perineum, as the occiput, when passing over it, greatly distends it.

4. In cases of obstructed occipito-posterior positions, in which the rotation takes place at the outlet of the bony pelvis, while the head is in the grasp of the curved forceps, there is very great danger in the case of primiparæ of the forceps lacerating the soft parts, on account of the oblique position into which they are thrown.

5. To prevent this accident, either, 1, the blades ought to be cautiously removed, the head fixed in position, and the uterus allowed to finish the expulsion of the head; or, 2, the curved instruments may be reapplied, adjusted to the altered relation of parts; or, 3, a straight, short pair may be applied, and the further advance of the head thereby secured.

RENAL CALCULUS (*The Lancet*, October 24, 1874).—At a recent meeting of the Pathological Society of London, Dr. Cayley showed a renal calculus which was discharged through a fistulous opening in the loin. The patient is now 33 years of age, and in good health. Seven years ago he suffered from an abscess in the right lumbar region, which discharged for about three years. About six months after its formation, the calculus came out. It was of irregular club shape, the size of a hazel-nut, with a facet at the narrow end as if it had been broken off. Two smaller calculi subsequently ulcerated out, one close to the crest of the ilium, and one below the great trochanter, the scars still remaining. The patient was employed at chemical works where sulphite of arsenic is made, and it was a question whether there was any genetic influence in his occupation.

UNSUSPECTED CALCULI IN THE BLADDER (*The Lancet*, October 10, 1874).—Mr. John Foster reports the case of a gentleman, æt. 76, who had a narrow stricture at the orifice of the urethra. He had considerable frequency in making water, but had suffered no pain, and never passed any blood. The stricture was divided, and a catheter introduced to ascertain if he emptied his bladder. With the urine came a large number of very small calculi, and, by injecting warm water, over a thousand were washed out. They had never caused him any inconvenience.

NOTES AND QUERIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

DR. H. Y. EVANS will read a paper before the Philadelphia County Medical Society, November 25, 1874, at 8 o'clock P.M.

Subject, Rest in the Treatment of Pulmonary Disease.

All regular practitioners of medicine in the city are invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM NOVEMBER 17 TO NOVEMBER 23, 1874, INCLUSIVE.

HUBBARD, VAN BUREN, ASSISTANT-SURGEON.—Assigned to duty at Jackson Barracks, La. S. O. 187, Department of the Gulf, November 17, 1874.

KINSMAN, J. H., ASSISTANT-SURGEON.—Relieved from duty at Fort Abercrombie, Dakota Territory, and to report in person at these Headquarters. S. O. 252, Department of Dakota, November 16, 1874.

CRONKHITE, H. M., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Dickson, to comply with War Department Orders 233, c. s. S. O. 186, Department of the South, November 17, 1874.

YEOMANS, A. A., ASSISTANT-SURGEON.—Granted leave of absence for three months, on Surgeon's Certificate of Disability. S. O. 250, A. G. O., November 17, 1874.

DICKSON, J. M., ASSISTANT-SURGEON.—Assigned to duty at Savannah, Georgia. S. O. 186, c. s., Department of the South.

JOHNSON, HENRY, MEDICAL STOREKEEPER.—Granted leave of absence for three months. S. O. 253, A. G. O., November 20, 1874.

SATURDAY, DECEMBER 5, 1874.

ORIGINAL COMMUNICATIONS.

SOME REMARKS UPON THE RELATIVE STRENGTH OF CHLOROFORM AND ETHER, WITH HINTS UPON THEIR USE AS ANÆSTHETICS.

BY OSCAR H. ALLIS, M.D.,

Surgeon to the Presbyterian Hospital.

Read before the Philadelphia County Medical Society, October 14, 1874.

MR. PRESIDENT and Members of the Association. Gentlemen: Desirous of fulfilling, so far as I may be able, the obligations assumed in becoming a member of this Society, I have cheerfully, though with many misgivings, complied with a request from your Secretary to present a subject for this evening's consideration. I have chosen *the administration of anæsthetics*, a subject that must continue to be of interest while pain and disease are the heritage of man. But I am frank to confess that I introduce such a subject before this Society with very many misgivings, as some of your members have been familiar with these agents since their introduction to surgery. There is, however, in this a compensating pleasure, that we will have the advantage of listening to these gentlemen after my brief remarks are ended.

My practical experience with anæsthetics began with my appointment to the surgical clinic in the Jefferson Medical College in 1867. Here, through the kindness of the Professor of Surgery, I was given in charge of the chloroform, and for more than two years assisted him in that capacity in his public and private labors. I look back upon the discipline of those years as among the most valuable of my life. Professor Gross is a firm believer in the superiority of chloroform over all other anæsthetics, is careful to instruct his assistant in its use, and then gives him to understand that his duty is *wholly with the chloroform,—that he has no other duty,—and this duty he expects him faithfully and conscientiously to fulfil*. Herein lies the "good luck" of Professor Gross. I know of no other way of accounting for it; for at a public clinic, where every age and condition of life presents itself, one has certainly every right to look for disasters, and yet in all my service with him I recall but a single instance of apparent danger. A female, whose surgical malady was complicated with phthisis, was about to be operated upon, and, as she was tardily influenced by the chloroform, an assistant dashed on the towel a quantity from a bottle that would hold two pounds. The result in this case gave some alarm, and taught me—

1. Never to be in a hurry to effect anæsthesia.
2. Never to use a large quantity when the patient is nearly influenced.
3. To use a small vial, from which a small quantity can be dropped, and that quickly.

From this time forth I began to influence my

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cases rapidly, and with very little chloroform; but when it occurred to me to make some observations upon the amount necessary to effect anæsthesia in ordinary cases, the result was the construction of the following apparatus:

It consists merely of two tin cones soldered apex to apex, with a tube projecting from the upper or receiving cone into the lower. Around the base of the larger cone a piece of linen is tied. When the instrument is to be used, a towel is properly folded and pinned around the larger cone, presenting, when complete, a cone of sufficient size to cover neatly the mouth and nose.



This cannot be called an inhaler with any more propriety than can a towel or a napkin; but, while it resembles the latter in principle, it has in practice very many and important advantages.

1. The chloroform falls through the tube (Fig. 1) upon a single layer of linen (a), to both sides of which the air has ready access, and is accordingly instantly evaporated.

2. Every drop is conveyed to the patient.

3. A few drops at a time are all that are ever required, and all the patient can breathe with comfort.

4. The dropping may be more or less constant, as the instrument need not be removed from the face, and by means of a "dropper" the operator can gauge the amount to the necessities of the case.

5. The anæsthetic influence is gained gradually, imperceptibly, and rapidly, and with a minimum amount of chloroform. I seldom use more than a drachm and a half in adults.

6. As only a few drops need be added at a time, the danger must be far less than when an indefinite quantity is poured on from a bottle at once.

7. There is no exclusion of the air, but the air that is breathed is impregnated with a fresh supply of chloroform.

8. The time consumed is usually from three to ten minutes.

9. The influence once obtained may be easily maintained.

I have used this repeatedly for nearly two years, and have found it all that I could desire. It is exceedingly convenient as a frame-work about which to pin the towel, and as a receiver of the chloroform, and so simple in construction that any tinsmith could repair it should it be broken.

As to its rendering the use of chloroform safe, I can only say that *safety does not lie in an inhaler, but in him who uses it*. I think, however, it is far safer to produce anæsthesia by an equal and constant supply of chloroform, *i.e.*, drop by drop, than by pouring it on *at intervals*, and in quantities even so small as half-drachms at a time.

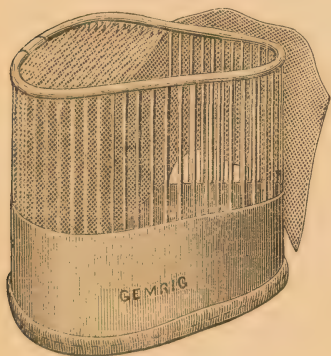
When I use it, I drop my chloroform from a graduated bottle containing three drachms; and the operation must be long and severe that will require a refilling of my little vial. The whole apparatus is calculated to render one most watchful.

The facts that he holds in his hand a vial with three drachms of chloroform, a drachm and a quarter of which, properly used, is to effect complete anæsthesia; that every drop of the chloroform goes to his patient, and that to effect his purpose the supply must be constant; that as he watches the dropping he watches also its effects upon his patient,—such thoughts must, I say, keep the administrator on the alert, and he who watches his patient with such care will not often be embarrassed by unpleasant symptoms. *Too much care cannot be exercised by the chloroformist*, since Simpson says of it, "I have known seven inspirations from thirty drops to place a strong man perfectly under its influence."

As soon as I had satisfied myself with chloroform, I turned my attention to ether. In children, and in some females, I could effect rapid anæsthesia with the apparatus; but in the majority of cases I found it unsuitable. With it I could not give ether fast enough. One strong man to whom I was administering it kept repeating, "Give it to me faster; pour on the whole bottle," though I was pouring it on at the time in a constant stream, and it was running down the edges of the towel. To satisfy myself about it, I frequently inhaled it, and experienced the same desire for *more ether*. This experience suggested to me the necessity of a larger evaporating surface, and, as a result, the following apparatus.

It consists of a wire frame-work, sufficiently large to cover the lower part of the face. The wires are

FIG. 2.



parallel, and about an eighth of an inch apart. Between the wires, from side to side, a strip of bandage two and one-half inches wide is passed. By reference to the figure (Fig. 2), the manner in which this is accomplished will be readily understood. Upon the right, a part of the wire framework is purposely left exposed to show the manner of its construction. The instrument is only about four inches long and three inches at its greatest width, and yet it consumes nearly three yards of bandage when passed between all the wires. By further reference to the figure, it will be seen that each section of the bandage is separate from the adjoining one, thus permitting the air to pass freely to both sides of it. When ready for use, the sides are covered, but the top is left open for the free entrance of air and for convenience in supplying the ether. I usually supply the ether from a gradu-

ated bottle furnished with a dropper-cork (Fig. 3), as by such a convenience I can add the ether as gradually or as rapidly as the case may demand.

My mode of using it is as follows. Placing it over the face, I sprinkle on *a few drops of ether*,—I mean literally but a few drops. In a few seconds I add a few more drops; and usually in from half a minute to a minute I find that I can drop it more constantly. As soon as I notice *the deep inspirations* I pour on a small stream, watching carefully lest I irritate the larynx, and as soon as I find the patient tolerant of its vapor I add it in larger quantities, and as rapidly as can be evaporated, and am usually gratified by seeing my patient pass *quietly* under its influence in from three to ten minutes.

Now, it may be asked, what advantages does this possess over the towel and sponge? First, let me speak of the disadvantages of the towel and sponge. The towel is usually fashioned into a cone, and placed in a similar cone of paper. The object of the paper cone is to prevent the evaporation of the ether, *so that the patient will get it all*. Now, it is quite certain that the patient does get all the ether, and that by means of the paper cone very little can escape. But it will be noticed that there is left but a very small evaporating surface, for the *inner surface* of the towel mainly yields the ether; and it is still further true that the more rapidly the ether is poured on—*i.e., the more fluid ether there is in the meshes of the towel—the less rapidly is the vapor of ether evolved*. The reason of this is obvious upon a moment's reflection. The moment the ether is poured on liberally, the towel becomes wet with it; its various folds, lying in close contact with one another, are filled with fluid ether, and it may not inaptly be regarded as a solid mass of ether, whose evaporation is only possible from the inner surface of the towel. This is a matter of easy demonstration. Take, for instance, two towels; fold one into a cone, and, investing it with a paper one, pour on an ounce of ether. Take another towel, and, suspending it so that its entire surface is exposed to the air, pour on a like quantity. The latter will be dry, and there will not be a trace of ether left in a minute's time; while the former will be damp and cold, and yield a strong odor of ether for at least five minutes.

With the sponge it is even worse. The sponge usually recommended is the finest that can be found. The pores, so to speak, are very small, and when two or three ounces of ether are thrown upon it it becomes a mass of liquid ether, with an exceedingly small evaporating surface, and hence wholly unfit for the rapid disengaging of the vapor of ether.

I return now to what I think I may in all fairness claim for the apparatus.

1. It possesses a *large evaporating surface*. You will remember that it consists of a bandage three inches wide and one hundred inches long, so arranged that in its entire length no fold touches its fellow, and with a free access of air to all parts of it. As compared with this, the evaporating surface of the towel or sponge is very small.

2. With a large evaporating surface there must be rapid evaporation of the ether, and consequently rapid anæsthesia. I have placed patients under its

influence in three minutes, seldom requiring ten minutes.

3. With rapidity of evaporation may be associated *economy* of ether. I usually require less than *two ounces* in adults, and rarely three ounces.

4. There is no exclusion of the air, and no unpleasant laryngeal irritation. I have rarely had a patient cough or spit during the administration, and it is extremely rare for patients to remark upon its unpleasant odor or object in the least to inhaling it.

In this respect it presents a marked contrast to the mode commonly adopted. It is usually considered important to exclude the air, and to give the patient "nothing but ether" to breathe. The result is that the patient resists as for life, and is only overcome by superior numbers.

Lastly, the inhaler need not be removed from the face; and, the supply of ether being constant and fresh, the patient passes under its influence quietly,—often without a struggle. Even after I have effected complete anæsthesia I continue adding it in small quantities,—a few drops at a time,—watching the degree of effect, which is usually indicated by the character of the respirations. A little experience will enable one to maintain throughout an entire operation a uniform degree of anæsthesia,—a condition very gratifying to the surgeon.

But an inhaler is not a convenient thing to carry with one in private practice; and, as a towel is usually to be had, allow me to make a suggestion in regard to folding and using it. (1) Spread out the towel, and over it place a newspaper of the same size; (2) make two folds of it lengthwise, the paper being folded within; (3) now double it again, so that it will be about ten inches long and eight wide; pin this into the shape of a cone. If, now, you examine this, you will find that there is but a *single layer* of the towel that can be wet with the ether, as the next layer is paper. Now, use this with the same care that I have enjoined in using the inhaler. Begin with a few drops, and add no more than *a few drops at a time* until the patient has become accustomed to the vapor, and then never add more than *a drachm at a time*, and be sure that this drachm is sprinkled over a broad surface. The supply of ether must now be quite constant; therefore, two or three times a minute *sprinkle* on a drachm, taking care not to *wet* the towel by adding a large quantity at a time, and you will be amply repaid for your pains in seeing the ease with which you effect your purpose.

As to sponges, a fine sponge is the worst thing that can be selected. The coarser the sponge, the better it will be found to be adapted for the purpose.

I will here insert the more important rules laid down by those most experienced in the use of anæsthetics. There should be no possible barrier to the freest respiration. Among the fatal cases from chloroform, one is recorded where "the necktie was removed as soon as the man became blue in the face."

The stomach, as a rule, should be nearly or entirely empty. If the stomach is distended either from food or drink, vomiting will almost invariably ensue, and

vomiting when the patient is narcotized from any cause is not unattended with danger. Among the cases put down as deaths from ether will be found those that really are due to vomited matters passing into the trachea.

Often when the patient shows a disposition to vomit it may be averted by hastening the anæsthetic effect, and this is especially true of ether; but when vomiting is inevitable, the patient should be placed in the most favorable position for the escape of the contents of the stomach. It is not enough to turn the head to one side; the body should be turned on the side, and then the slight turn of the head downwards will be sufficient for all practical purposes.

It is strange how often this precept is violated. In one case, however, I even saw a doctor put his hand over the patient's mouth, to prevent the contents of the stomach from escaping upon the bedding.

*There is but one posture for the administration of chloroform, and this is the reclining. From this rule there is no safe departure.** Many of the fatal results from its use are from neglect of this cardinal maxim. Ether, on the contrary, knows no such law. When, however, the erect position is desired, let the anæsthetic be induced in this posture, for I question the safety of raising a patient thoroughly anæsthetized in the reclining posture to the erect. If the etherization is begun in the erect posture, its progress can be watched, and, in case of danger, the position can be changed.

The *degree of narcotism* will depend upon the object for which the anæsthetic is administered.

It is a well-known fact that a patient may cry and moan through an entire operation, and yet remember nothing of it at the return of consciousness. But the rule is, and it is founded upon the experience of surgeons, that severe operations should not be undertaken without first securing a profound impression from the anæsthetic.

Lastly. Leave the patient under the care of a competent, faithful attendant, with positive orders not to leave his presence until the effects of the anæsthetic have passed away. One of the most distressing cases that I have ever read was that of a man who had been operated upon for strangulated hernia, who, waking from the operation, snatched away the dressing and tore out in his frenzy yards of his own entrails.

Some begin with ether, and bridge over the exciting stage with chloroform. I would be afraid of this "bridge." Its farther side might be in eternity,—since it is nothing less than using a ten-fold more dangerous anæsthetic at the moment when danger is most imminent.

Out of one hundred and sixteen deaths from chloroform, three-fourths (88) occurred in this very stage of excitement.

Others use a mixture consisting of two parts of ether and one of chloroform. This is called chloric ether. This is used very generally by dentists, and

* As the design of this article is merely to offer a few hints upon the administration of anæsthetics, no theories are offered for the action or fatal results of the agents.

in the sitting posture. An ounce and a half of this mixture is usually sufficient to effect the desired purpose, *but its use cannot be too strongly condemned.* This ounce and a half, you must bear in mind, has half an ounce of chloroform, *and this is given in the sitting posture! and as freely as if it were only ether!*

"In the mixture of chloroform and ether, we have no definite chemical compound formed. When the mixture is exposed to air, the proportion of the ingredients is continually changing by the greater proportionate loss of the more volatile body, and it is quite impossible to apply any formula by which we can judge of the comparative rate of evaporation of the two ingredients."*

The union of the two ingredients may properly be called a mixture, and the mixture remains constant so long as it is excluded from the air; but the instant it is used for the purposes of anæsthesia, the more volatile ether first escapes, leaving behind it the more powerful but less volatile chloroform. I must not be understood as saying that the vapors do not mix; they certainly do pass off simultaneously. Nor can they be said to separate. But the important fact that the boiling-point of the two liquids is so different—the ether boiling at the temperature of the body, *i.e.*, 96° Fahr., while chloroform boils at 142° Fahr.—must render the mixture on exposure to the atmosphere a very inconstant one, and especially so when warmed by the air from the lungs.

Whoever, then, uses the mixture may depend upon it that the effect he gains is chloroformic; and let him proceed with corresponding caution.

I should not question the statement of any one who would say that he had produced perfect anæsthesia with a drachm and a half of the mixture (*i.e.*, 3ss of chloroform and 3j of ether), since Dr. McDowell, Professor of Surgery in Trinity College, says of chloroform, "I have known thirty drops to suffice."

Statistics show that there is one death in 5588 administrations of this combination, making it but little less than half as fatal as chloroform alone.

But I may be asked to express an opinion as to the relative safety of the two anæsthetics.

I was fortunate enough to give chloroform and ether to five persons under similar circumstances, and found by comparison that chloroform—drachm for drachm—was eleven and four-sixths times stronger than ether. In comparing ten cases as nearly alike in age, sex, and strength as I could, I obtained a similar result.† But the relative energy of the two anæsthetics will appear to a greater advantage if we recall the mode of their administration: with chloroform it was sufficient to moisten, drop by drop, a surface about three inches square; while with ether to accomplish the same result a surface three inches wide and sixty long was required.

Herein will be noticed a very surprising difference between the two anæsthetics, and to the reflecting mind this will convey a most important lesson, and

suggest a possible explanation for the sad contrast in their career. In less than a quarter of a century, hundreds of unfortunate human beings have met, through the agency of the one, a sudden and appalling death; while with the use of the other, safety is guaranteed with the most ordinary care.

But I will not do chloroform the injustice to say that the guilt is wholly its own. Four thousand cases,‡ representing every phase of society and embracing every age and condition of body, are proof against such an attack.

At whose door, then, lies the blame? Partly at its own, but mainly, I believe, at the thresholds of its adherents.

I say partly at its own door, for I do not think that any one has ever yet ascertained the lethal energy of chloroform. I am confident that I can influence the *average adult patient with less than a drachm and a half of chloroform.* Of this amount, scarcely a third accomplishes its mission; the other two-thirds are lost. Hence, I say, to the energy of the agent itself may be attributed a part of its fatal consequences. In the *Lancet* is a case where twenty minims are said to have caused death. Once I could not have believed this; but the more I employ chloroform the more I am struck with amazement at its magical powers.

But I have charged the disastrous effects of chloroform mainly to those who administered it. Kidd long ago noticed the significant fact that ninety per cent. of the deaths from chloroform were during trivial operations, and he was not backward in assigning the true reason. He says "that chloroform is given into the hands of *hospital-dressers, students, and female nurses*, and that minor operations are usually undertaken without a due corps of competent assistants."

Very few taking charge of the anæsthetic have the least conception of the responsibility of their post. They seem to feel that they must *sponge, control hemorrhage, hand instruments, and have a general supervision of the case, or they are not really useful.* An interne in one of our hospitals is reported to have left the towel over a patient's face and to have gone into an adjoining room for a needed article; and once while I was operating for a friend he left the towel over the patient's face, and came around the bed to see the progress of the operation.

How often have physicians gone *alone* to their patients, because the patient objected to having a "strange doctor" present, and there for some trifling operation administered chloroform, assisted only by persons ignorant both of the agent and of the approaches of danger! I was never frightened but once in the use of chloroform, and that was in the case of a lad whose knee I wished to examine under its influence. Having induced anæsthesia, I handed the towel to a female attendant who had assisted me before in the same capacity. The lesson was a fearful one; and had my patient died I might have been fortunate enough to find a "fatty heart," but

* Dr. Henry Leffmann.

† Snow says that chloroform is more than ten times stronger than ether by measure.

‡ Record of Prof. Gross. See Principles of Surgery, under Anæsthetics.

never after would my conscience have been free from remorse.

While, then, I would exonerate chloroform from the charges that have been laid upon it, I cannot, with the fearful list of casualties before me, do less than express a deep regret that it is still so extensively used by the profession. That it possesses certain advantages over ether, I am fully aware; but that these advantages are greatly magnified, I do not hesitate to affirm. In my own experience I have not found ether more irritating to the larynx, more tardy in its effects, or more likely to produce delirium, than chloroform. I make these statements after a long and faithful experience of both of these agents, upon myself and upon others, and I feel confident that others will experience like results if they will once *learn how to give ether*.

Study, then, the nature and effects of ether. It presents not a single physiological difficulty that care and experience will not overcome; and, when you have once obtained *the secret*, you will feel amply repaid in the security of your patient, and in the fact that you may give your whole attention to your own procedure, without the furtive, anxious glances that are necessary to the successful employment of chloroform.

CASES OF HYDROCELE COMPLICATED WITH VARICOCELE AND CYSTOCELE, TREATED WITH ERGOTIN AND TINCTURE OF PERCHLORIDE OF IRON.

BY CHARLES D. GREEN, M.D.,
Philadelphia.

CASE I.—*Hydrocele of the tunica vaginalis, and encysted hydrocele of the spermatic cord.*—S. B., aged 19 years, resident of Philadelphia, came under my care Jan. 2, 1873. He had always enjoyed good health, with the exception of having had for the last nine years a hydrocele of the right tunica vaginalis. Twelve months previous to seeing me, the swelling had attained the size of the doubled fist, and the radical treatment for hydrocele was resorted to with apparent success; injection of iodine being used. Some time after, however, a small swelling appeared in the upper part of the scrotum, and gradually increased in size to that of a turkey's egg, lying in front of the pubes, in the site of the external abdominal ring, passing somewhat into the inguinal canal, and also down towards the testicle, which could be distinctly felt in the lower part of the scrotum. The swelling could be pressed slightly downwards or upwards; there was no indication of hernia, no remarkable impulse on coughing; no alteration in size or position as the patient altered his attitude, and when a candle was used the tumor was seen to be transparent. He had been refused admission to the naval service in consequence of his affection, and was anxious for a cure.

Jan. 4.—With a small trocar and canula about six ounces of clear-colored fluid were drawn off, and one grain of ergotin, with twenty drops of distilled water, injected into the sac and allowed to remain. The canula was then removed, and cold applications ordered in case of too much heat and tenderness.

5th.—Patient had not suffered much, though there was considerable swelling of the whole scrotum.

9th.—Since the 6th, the swelling had diminished almost entirely. In the site of the original disease there was a hard, firm mass, about the size of an almond.

10th.—Dismissed, cured. Saw him in June last; parts were normal.

CASE II.—March 13, 1874. *Hydrocele complicated with epiplocele*, etc.

A ship-carpenter, temperate, and of strong fibre. Twelve months previous to consulting me, an inguinal hernia appeared on the right side, which, after application of leeches while the patient was in the horizontal position, returned spontaneously. Subsequently it often came down, but it was speedily reduced by change of position. Six months before my seeing him, on one of these occasions, it could not be returned, although leeches and cold and warm applications were had recourse to, and the swelling remained in the canal and superior part of the scrotum. At the bottom of the scrotum was another swelling, about half the size of the first, soft, elastic, and transparent, seemingly quite distinct from the one above, and presenting all the characteristics of hydrocele. The upper swelling was soft and doughy in feel, and all attempts at pushing the protruding parts into the abdomen were abortive. The patient was desirous of proceeding on a long voyage, and anxious for something to be done before he left, as he felt some inconvenience from the size of the scrotum, produced by the two swellings.

On puncturing the lower part of the scrotum, about twelve ounces of clear-colored fluid was drawn off, but no change was perceptible in the upper part of the swelling. Three-fourths of a grain of ergotin and twenty drops of distilled water were injected and allowed to remain. Immediately after, he experienced a smarting pain in the testicle and some uneasiness in the abdomen. Both, however, subsided after a couple of hours.

16th.—He had had no return of the pain, and the swelling was nearly the size it was before the operation, but free from pain or tenderness. Ordered to remain in bed and continue to support the part in a sling.

19th.—Swelling was almost entirely gone; testis could be felt distinctly, of its natural size and in a healthy condition. Dismissed, cured.

CASE III.—*Hydrocele (of tunica vaginalis) complicated with varicocele.*—Jas. H., aged 73, consulted me April 15, 1874 (a lawyer, of temperate habits, rarely ever sick, and active for his age). Four months previous to seeing me, after a trifling strain in lifting books, he first noticed an unusual enlargement of the scrotum, observable during the day, but disappearing in the course of the night. In about a fortnight it became stationary, and remained so up to seeing me, excepting that it was gradually increasing in bulk. The scrotum was about the size of a quart jug, and of a pyriform shape, the skin very tense; the swelling, which was on the left side, extended as high as the external abdominal ring, and had all the ordinary indications of hydrocele of the tunica vaginalis.

April 16.—Scrotum was tapped, the fluid amounting to over two and a half pints, and one grain of ergotin and twenty drops of distilled water injected into the sac and allowed to remain.

18th.—There was considerable effusion since the 16th; scrotum red and tender.

20th.—The later symptoms ameliorated; but the effusion as great as on the 18th.

21st.—Swelling much less, and appeared to depend as much on the enlargement of the veins of the scrotum as on effusion in tunica vaginalis.

22d.—Effusion gone; veins of scrotum enormously enlarged. Injected two drops of tincture of perchloride of iron at three points in the varices, strapped the scrotum, removing the strips the next day; the points of punctured veins were hardened, but showed no active sign of inflammation; no dressing other than supporting the scrotum was used.

24th.—Dismissed.

Saw this patient in August last. No sign of hydrocele or varicocele, the dartos keeping the scrotum well corrugated.

Case IV.—Hydrocele (of the tunica vaginalis) complicated with cystocele, treated with ergotin and perchloride of iron.—John L. J., from Dover, Del. (a tiller and hedger), æt. 62, temperate habits. Five months previous to seeing me, while getting out timber, he felt something suddenly give way in the left groin, not followed by much pain, but by a large swelling of the scrotum.

June 18.—Scrotum tense and painful on pressure, and elastic; testis occupying the anterior middle, the swelling presenting more the appearance of hæmatocele than of hydrocele. Drew off fourteen ounces of chocolate-colored fluid, and injected half a grain of ergotin, with twenty drops of distilled water; allowed to remain. No severe pain; further examination revealed unusual enlargement of the spermatic veins; testis of usual size, and apparently healthy.

19th.—Effusion as great as at the time of tapping yesterday, but no redness or pain except near the external abdominal ring.

21st.—Effusion gone, but some tenderness in the course of the spermatic cord.

23d.—Could distinctly feel and separate the veins from the vas deferens. Having applied a compress over the pubes, injected two drops of the tincture of perchloride of iron in the middle of their length, making three punctures (using the hypodermic syringe). The pain was sharp and smarting, and increased on removing the compress from over the pubes some three hours after; ordered evaporating lotions and support to the scrotum. Operated at 10 A.M. Saw him again at 10 P.M.; was surprised to find the amount of coagulation; one clot large as a hulled walnut, a little tender.

24th.—The clots firmer; no increase in size, but the walls of the spermatic vessels resisted being pressed together, and from this time they underwent rapid diminution, no blood circulating through them.

This patient went home on the 29th of June. I saw him in August. The spermatic vessels had so far disappeared and the remains of them were so cord-like in feel as to make it difficult to distinguish them from the vas deferens.

Remarks.—Out of thirty-five cases thus treated I have not found an undue amount of inflammation, yet the inflammation has always caused such organic changes in the serous lining that adhesion or absorption followed.

In all the cases the effects of the use of ergotin appeared remarkably mild, equally suitable to old age and youth; and the return of the parts to their natural condition seemed more speedy than after the use of iodine, port wine, or even the primary galvanic current, which latter I have used over twenty-two years.

It might be a question whether, in these examples, the cures were in reality complete, as some of the parties were seen so short a time after operation (some living at a distance); but I have no doubt on the subject, as out of many instances where I pursued a similar practice I have never had a patient return with the disease again upon him, and the worst of the above cases I know, from personal observation since, to be cured.

Case I. was somewhat peculiar; I termed it encysted hydrocele of the spermatic cord, under the impression that it was so. If such were the fact, it was, it would be observed, an instance of this form

of disease (comparatively a rare one) occurring after the successful performance of the radical operation for effusion into the tunica vaginalis. I thought possibly the collection of fluid had taken place in the upper part of that cavity where adhesions had not been produced; but my experience went against this view, for if adhesions in any case had been caused throughout almost the entire extent of the serous surfaces, the actions in any non-adherent part were so altered that the disease rarely, if ever, recurred. Besides, if this had been the state of affairs, in all probability the recent adhesions would have yielded in such a manner that the swelling would have increased in a downward direction, and occupied far less of the inguinal direction than it did in reality.

Case II. presented a variety, inasmuch as there was an irreducible hernia present as well as a hydrocele. The hernial sac was, in my opinion, filled with omentum, which had become so altered in shape and consistence, and possibly also adherent, as to be irreducible.

I would not have resorted to more than simple tapping, for the radical operation could not be discerned so free from danger as in an ordinary case. The inflammation might extend from one serous membrane to the other, and both being so contiguous the effects might be alarming. The patient, however, was about to proceed to parts of the world where he might not have the advantages of surgical advice; and even in the event of his being seen by some other surgeon, with the hydrocele perhaps much increased, there might be greater difficulties and dangers under such circumstances than were at present apparent. I accordingly used the injection stated, but not without having made sure there was no direct communication between the two sacs. Fortunately, there was no extension of the inflammation, and the case might be considered as simplified in character, there being only one disease instead of two, the remaining one being probably in that condition that it would never alter. In this instance the patient had complained of considerable pain in the abdomen immediately after the operation, which, under the circumstances, caused me more anxiety than common examples. My anxiety, however, was allayed by the fact that some persons feel great pain in the course of the spermatic cord after injection of iodine, etc., extending to the loins and even to the whole abdomen; and doubtless this was the case here, and not from any continuous action on the peritoneal surface.

For the last seven years I have had frequent opportunities of witnessing the effects upon animals of ergotin injected in the tunica vaginalis communis, in producing adhesion or absorption of the lost fluid in the sac. On examining the pig (the animal selected) after operation, in nearly every instance there was firm adhesion, and the sac was so altered anatomically as to defy the distinction from the tunica albuginea: the cases noted extended to fifty-six, including those in which I injected tincture of the perchloride of iron in the cord and spermatic vessels, to produce atrophy of the testes instead of immediate castration. The age of the animal was from

two to eighteen months. The large size of this animal, the active circulation of the blood through its spermatic vessels, and the facility presented by the number so easily obtained, have given me almost unlimited number in one year for experiment, as all the males are castrated as early as possible.

Case III. occurred in a person seventy-three years of age, a period of life at which it is seldom advisable to operate, on account of the danger of shock to the system; the patient should be content with occasional tapping; but here I acted otherwise, being induced to do so chiefly on account of the hale and comparatively robust condition of the parts affected and the mildness of this treatment. The treatment of this and the fourth case resulted in a rapid and, to present appearance, permanent cure.

Case IV., apparently so serious, is now following the laborious business of *tilling, ditching, hedging*, etc., and declares himself to be *as well as he ever was in years past*.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SURGICAL CLINIC OF DR. T. F. MORTON, NOVEMBER 22.

Reported by J. J. KIRKBRIDE, M.D.

DR. MORTON presented to the class several specimens, illustrating a gunshot wound involving the knee-joint, the popliteal artery, vein, and nerve, and gave the following history of the case:

My friend R. H. Wevill, M.D., a prominent practitioner, residing in the lower section of the city, aged 45,* received a pistol-wound in the left knee, Nov. 17, 1874; the ball entered on the inner side of the knee, opposite the internal condyle, an inch below margin of the patella, passed through the popliteal space, then upward to the outer side of the thigh, and was found immediately under the skin on the outer part of the biceps muscle, and was extracted by Dr. Nebinger at 6 P.M. the same day. At 6.30 P.M. I saw the patient, and found him suffering intensely from pain in the limb, which was cold below the knee; very great swelling existed in and adjacent to the popliteal region and calf of the leg; there was no pulsation in either the anterior or posterior tibial arteries, and there was total loss of sensation on the outer side of the foot, with a general numbness of the entire leg; there was considerable shock, a quick pulse, a cold skin, and a blanched countenance. He had taken two grains of morphia, and had the knee leeches on his own responsibility. At 10 P.M. I had a consultation with Drs. Nebinger and J. H. Packard; we found marked heat in the leg, but no pulsations could

be felt; there was continuous shock; pulse 115; skin cold. A wound of the popliteal artery was diagnosed, with perhaps involvement of the vein and contusion or wound of the nerve.

It was decided to envelop the limb with cotton, to apply hot laudanum fomentations around the knee, to administer milk-punch and liquid nourishment, and to await reaction. We again met in consultation Nov. 18, at 12.30; pulsation was now found in the anterior tibial artery, with undue heat in the limb; marked pulsation also existed in the ham, with distinct aneurismal bruit.

The consultation decided that the ball had opened the artery, forming a false aneurism, and that an exploratory operation should be made; that after opening the popliteal space in a median line, should the artery and vein be found injured with any joint-complication, amputation should be performed, or to be guided by the circumstances.

After etherization, I made an incision in a median line five inches long; on reaching the cellular tissue, an immense mass of clotted blood was found, which extended down to the femur; the finger passed in found loose fragments of bone and evident involvement of the knee-joint; the deep tissues and blood-vessels were so extensively lacerated that it was determined to amputate the thigh, which was done by rectangular flaps; little or no blood was lost. The patient bore the operation well, and the stump was brought together with silver wire, dry dressings were applied, and a firm roller from the groin down.

Examination of the limb.—The popliteal region was found infiltrated with blood, which extended down below the soleus and gastrocnemius muscles in large quantities; small spiculæ of bone were found among the clots. The external popliteal nerve was severely bruised, having been brushed by the ball. The popliteal artery was opened, presenting a roughened oval wound, rather more than an eighth of an inch in diameter; the vein was wounded in two places, the ball making a wound of entrance and a wound of exit; both these openings were double the size of the wound in the artery. A small fragment of bone was found driven into the substance of the artery near the opening. The ball passed directly through the inner tuberosity of the inner condyle of the femur, from below upwards, producing a comminuted fracture, the wound of entrance being small, while the wound of exit showed much splintering. The interior of the joint presented the synovial membrane intensely congested, and there was marked increase of the synovial fluid.

Since the operation, the patient has been doing well.

HYPODERMIC USE OF QUININE (New York Medical Journal, November, 1874).—Dr. Alfred A. Woodhull reports three cases in which he has used, hypodermically, a solution of quinine of about six grains to the drachm.

The first was a case of quartan intermittent; the results were about the same as follow the oral administration. The only immediate local effect at each puncture was the death of the skin and its discoloration over a spot about a fourth of an inch in diameter. The second was a quotidian intermittent, which was cured. But in this case every injection was followed by the local death and sloughing of the tissue infiltrated, the sloughs being circular, and varying from three-fourths of an inch to an inch and a quarter in diameter. The patient was incapacitated from work for five weeks.

The third case was one of typhoid fever, in the early stages of which the injections were given. Fourteen of these were followed by local sloughs as in the preceding case, and were painful and annoying for weeks.

* Dr. Morton, on account of his legal connection with the case, has very properly refrained from giving any statement in regard to the circumstances of the shooting of Dr. Wevill. There are several versions of the affair afloat, and until the legal investigation is made it is impossible to arrive at the exact truth. The following narration is, however, probably substantially correct. Dr. Wevill received one or two notes from the husband of a lady whom he had previously attended, asking him to visit her professionally. He did so, and whilst at the house the lady asked him up-stairs to see some new furniture, or upon some other pretext. Directly after this the husband came into the room with a writing in one hand and a cocked pistol in the other, and demanded that the doctor should sign the paper, which was an acknowledgment of his having had criminal connection with his patient, threatening to shoot him if he refused. The doctor did refuse. An altercation ending in a struggle ensued, and the pistol was discharged. No one, so far as we know, believes that the charges against the doctor had any foundation in fact. His friends seem equally divided between the belief that the shooting was the result of an insane jealousy, and that it grew out of an atrocious attempt at blackmailing.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

HOSPITALISM.

A VERY noticeable feature of the papers upon hospitalism read at the late meeting of the American Health Association, and of the subsequent debate, was the singular unanimity in regard to the object to be attained and the singular diversity in the methods of reaching it. It is a universal therapeutic rule that when a large number of remedies are strenuously recommended by different authorities in any disease, no one of them is in any sense a specific, and most of them are about of equal value. We cannot help thinking that this rule holds good in the present instance, and that probably there is not much difference in the working value of the different plans; that the results depend more, far more, upon the *management* of the hospital than upon its mode of construction; that a good medical superintendent is of more consequence than any especially recommended system of ventilation; that in scrupulous cleanliness and an avoidance of overcrowding, and in the watchful care of one who is thoroughly trained for his work and has the brains to use such training, are to be found the requisites for success in hospital management. Beyond this, the problem seems to us largely as to the individual needs of the proposed hospital, and the comparative expense of the various plans.

As every case of sickness demands an individual study, so does every hospital problem. The amount of ground at the disposal of the institution, the

nature and situation of that ground, whether the institution is or is not to be used for clinical purposes, etc., may seem unimportant when compared with the question, What is best for the patients? Yet these secondary matters are really of very great importance; and, when it is evident that many plans are of about equal utility so far as concerns the welfare of the sufferers, such secondary considerations must be decisive.

In regard to the question of comparative expense, we have yet to see a fair estimate of the various plans made or even attempted. The first cost of a hospital is but a small part of the outlay. What folly, then, to make this the entire basis of comparison! The plan of a hospital undoubtedly does influence very greatly its running expenses, and a fair comparison between two rival plans must take this into consideration.

The great differences of opinion ought to teach medical writers humility, and all should remember the possible influence their words may have upon the benevolent. To denounce in unmeasured terms our present hospital systems is certainly unnecessary and injudicious; and, indeed, in the light of the results obtained by Mr. Callender in England, by Dr. Goodell in this city, and in the Pennsylvania Hospital, such language seems to us to partake of the nature of folly.

The Pennsylvania Hospital is old-fashioned in the extremest sense of the term. It has had its wards full of the worst surgical cases during many decades; and yet we doubt whether any private practice can show a better result than is there obtained. Until some one points out a fallacy in the statistics offered by Dr. William Hunt in his recent letter to the *Times*, we hope to hear fewer tirades against large and permanent hospitals. If surgeons in whose wards the evil results are obtained would once get the idea that perhaps their personal management of their cases and of their wards ought to bear the blame which they are so eager to lay upon "faulty construction," we should probably have fewer deaths inside and less complaints outside of hospitals.

In all astronomical problems the "personal equation" of the operator is always ascertained beforehand and taken into account. How much more important is the "personal equation" in surgical practice! Yet what medical statistics take notice of it? Comparative statistics, unless when the differences in them are very great, are a fraud and a delusion; and we doubt if any one will ever obtain a result much better than that of the surgeons of our old medical landmark.

LEADING ARTICLES.

THE TRANSMISSIBILITY OF TUBERCULOSIS.

I.

THERE is no question in modern pathology, human and comparative, fraught with greater interest and importance than this of the probable, nay, certain, transmission of tuberculosis from mankind to animals, and, possibly, from these to the human species. The solution of this problem is not only of urgent importance to sanitary science and the preventive medicine of the future, but so seriously concerns us individually of the present day as to demand our closest attention.

It becomes our imperative duty, then, to ascertain whether we are actually engrafting upon our children the fatal malady of tuberculosis by inadvertently administering to them milk derived from phthisical cows, as the experiments made by Klebs, Böllinger, and others lead us reluctantly to believe. It appears, also, further that we are all exposed to nearly the same danger of infection in eating the flesh of cattle, when, as not unfrequently is the case, it is loaded with pernicious tubercular matter.

The revival, in certain quarters, of the belief that tuberculosis is contagious, even in the human species, as Morgagni asserted more than a century ago, suggests the reflection whether we, as physicians and teachers, lay sufficient stress upon the great danger of allowing healthy people, especially young children, to associate with those who are consumptive.

We have yet, it is true, a great deal to learn with regard to the pathology and communicability of this disease; but there can be no hesitation in recognizing the importance of the results already achieved by careful experimentation and observation. Startling as the above assertions may appear, that milk and flesh, such important articles of our food, as well as mere cohabitation, may prove media for the conveyance of tuberculosis, yet nevertheless, in the presence of so many important facts, we must yield them our credence. In short, we fully concur with Chauveau, who says, "It now appears proved that the identity of tuberculosis with the other virulent diseases is so complete and so absolute that we must either recognize its virulency, or deny the existence of virulence altogether. There is no middle place in this dilemma."

And now for our facts. But first let us see how the authorities agree as to the histological identity of human tubercle with that occurring in the lower animals. A remarkable unanimity of opinion exists upon this point at the present time. Professor Reynal,* of the Alfort Veterinary School, stands almost alone in maintaining that the bovine and human tuberculosis are essentially different in their histological features. While admitting that the elements of the bovine tubercle are incontest-

ably identical with those of sarcomatous tumors, this writer, nevertheless, sees proper to separate it from the latter on account of the absence of nutritive vessels and the determinate volumes which can never be exceeded by the tubercular new growth. The majority of the authorities, however, appear to take the opposite view; of these, Prof. Schüppel,† who has made an almost exhaustive study of tubercle in general, and particularly that of the bovine species, has unquestionably fully established the absolute identity in structure and development of the cattle-disease with tubercle in man. Accepting, then, the fact as fully established that human and bovine tuberculosis are identical, the numerous and apparently authentic and exact observations—a few of which will be given later on—as to the extension and transmissibility of tuberculosis in the different species become somewhat startling; but the results of experiments undertaken by various authorities with the view of ascertaining whether the disease could be produced by inoculation with or the ingestion of tuberculous matter, are yet more so. As most of these experiments are no doubt already familiar to many of our readers, we shall do no more than summarize the conclusions drawn from them, excepting a few of the more recent ones, to which, perhaps, as yet, less prominence has been given.

So prevalent was the tradition of the inoculability of tuberculosis that even Morgagni abstained from making autopsies upon the phthisical, and Laennec alleged that he had acquired a tubercular ulceration upon his finger in this manner; yet, strange as it may seem, and despite this long-noted tradition, it was reserved for Villemin to establish, in 1865, by actual experimentation, the certain transmissibility of this affection by inoculation. The animals experimented upon were chiefly rodents,—rabbits and guinea-pigs,—and the material, tubercle from the human lung. The number of animals inoculated was large, and tuberculosis, more or less extensively developed, constantly resulted. No matter in what part of the body these inoculations were made, the tuberculization that followed was marked by the same serious characters in all, many of the creatures dying after a variable period, and others, falling into a state of marasmus, were killed. The lesions noted in them were chiefly found in the lungs, which were more or less infiltrated with tubercles; but other organs and textures were not exempted,—the spleen, liver, bronchial and mesenteric glands, etc., being also involved in many cases. Experiments were also made upon ruminants and carnivora (sheep, dog, and cat), but the results with these were generally negative; though a few of them so inoculated were found with the characteristic gray granulations and cheesy deposits in the viscera. Villemin also determined by further experiments that the tuberculous matter of animals, especially that of the bovine species, could give rise to tuberculization. From these experiments he concluded that bovine

* Reynal, "Traité de la Police sanitaire des Animaux domestiques," Paris, 1873, p. 701.

† "Ueber die Identität der Tuberculose mit der Perlsucht," Virchow's Archiv, Bd. 56, S. 38, 1872.

phthisis is identical with that of man. The next step was to ascertain whether the tubercular matter thus produced by inoculation was also capable, like that which arises spontaneously, of being transmitted; or, in other words, whether its virulence was retained beyond the primary transmission. The second generation of tubercular matter was found to have retained all its morbid activity, causing intense tubercularization in an equally short period. Villemin concluded from his experiments that phthisis in mankind was the result of a specific or virulent agent introduced into the organism.

Since the first report made by Villemin, numerous other experimenters have tested the validity of his statements, so that the successful inoculation of the lower animals with tubercular matter has ceased to be a novelty. Among these experimenters we find the names of Colin, Vulpian, Lebert, Cohnheim, Frankel,* Papillon, Nicol, Roustan, Laveran, Empix, Waldenberg, Wyss, Wilson Fox,† and Burdon-Sanderson; of these, the famous papers of the latter,‡ so extensively quoted by English writers, are probably the best known to American readers. All these experimenters succeeded in developing in rabbits and guinea-pigs a disease analogous to tuberculosis by inoculating them with tubercular products (gray granulations, caseous matter, and the sputa of phthisical subjects). It is evident "that the certain result of inoculation of tuberculous matter, of whatever kind, is to produce granulations in the lungs and other internal organs; that these granulations are anatomically identical with gray tubercle, that they become yellow or opaque, and eventually break down into a soft cheesy material. It is further admitted on all hands that the process is, so to speak, a self-destructive one; that in the act of inoculation a new element is introduced into the inoculated animal at the point of insertion, from which it is disseminated to all parts of the body through the lymphatics and arterial circulation."§ This latter statement is not invalidated in the least by the fact that the same effect may be brought about by the use of non-tubercular matter or the application of irritating setons, or other substances acting chiefly as mechanical irritants.

The results of these experiments seemed, it is true, to lead to views antagonistic to the idea of the specific nature and virulence of artificial tuberculosis; but they have been explained by stating that caseous deposits were first formed at the point of inoculation, or where the seton had been introduced, next in the neighboring lymphatic glands, and that it was the caseous matter thus formed which gave rise to the production of tubercles throughout the economy. This explanation is, moreover, entirely conformable to Niemeyer's theory of the development of tuberculosis in man,—a caseous deposit in any portion of the body (lungs, glands, articulations, bones, etc.) being, above all other

things, according to this authority, a predisposing cause to tuberculosis; and if the lungs are so frequently tuberculous, this is because in them oftener than anywhere else this caseous matter is formed. He further pointed out that the infection of the blood does not always arise through a cheesy deposit, as alleged by Bühl, since cases of acute tuberculosis occur in man in which no trace of such a deposit exists.¶ He, with others, believed in a gradual generalization of tubercle through the medium of the lymphatics, while Lebert** thought that capillary embolism was always an important factor in the artificially-engendered tubercle. Bühl's theory seems, however, to have been generally accepted in so far as experimental tuberculosis in animals is concerned.

Villemin†† performed a further series of experiments to meet the objections brought against his views, and presents, in an address delivered before the Imperial Academy of Medicine in 1868, some very telling and convincing arguments with regard to the production of tuberculosis by inoculation. In these experiments he sought to realize, in principle, the conditions of a real inoculation,—to wit, a very small wound and an inconsiderable quantity of inoculable matter. Although these conditions were never departed from, tubercularizations extremely variable in their intensity and generalization were obtained; every degree being noted, from a few isolated granulations to those startling generalizations in which every viscus was crammed with the tubercular product, a manifest proof that *the intensity of tubercularization is completely independent of the quantity of matter inoculated*. Observing that the alterations in the lymphatic vessels and glands were far from constant, they often remaining unaltered, and the local tubercularization at the point inoculated was often quite rudimentary, while the viscera of the animal were richly tubercled, therefore, says Villemin, *the number and extent of the internal lesions have no relation to the local lesions at the seat of puncture*.

The transmission of tubercle has been likened to a process of grafting; "but how can such a process explain the myriads of tubercular granules which stud the parenchymatous and serous organs?" asks Villemin. "Grafted tissues continue to live and develop at the places where they are deposited, but they are not reproduced elsewhere in the organism. This theory, at the most, could only explain the development of tubercle at the seat of puncture; and even then the inoculated tuberculous matter, to do this, must be endowed with a very active vitality. But the softened matter in the centre of a tubercle does not even contain any distinct elements; we inoculate only with a *detritus*. How can grafting explain the successful inoculation with sputa,—*sputa which has dried for twenty days*, as has occurred in our experiments? Does not all this prove that the inoculated matter acts by virtue of a principle inde-

* Virchow's Archiv, Bd. xlix. S. 216, 1868.

† "On the Artificial Production of Tubercle in the Lower Animals," London, 1868.

‡ Sanderson on the Inoculability and Development of Tubercle, 10th and 11th Reports Med. Officer of the Privy Council, 1867-68.

§ Sanderson, loc. cit.

¶ Niemeyer, "Pathologie und Therapie," Bd. i. S. 280, 7 A. fl.

** Virchow's Archiv, Bd. xli., xliii.

†† "Études sur la Tuberculose," Paris, 1868.

pendent of the histological elements entering into its composition?"

The *quasi*-tubercles induced in man and animals by various parasites, the microscopic appearances of which so closely resemble those of tuberculosis, are discussed by Villemin, as well as the results of injections of mercury, tallow, dust, and irritant substances of various kinds, even pus, into the bronchia and veins, and the great difference between them and true tuberculosis pointed out. To confound the former with the latter would be as great an error as to identify the pustules produced by tartarized antimony with those of variola.

Demet, Paraskev, and Zallonis, of Syra, Greece, not content with their success in transmitting this disease to rabbits by inoculation with the sputa and blood from a man affected with phthisis, performed the unprecedented and not-to-be-repeated experiment of inoculating a human patient whose history afforded no suspicion of a tuberculous taint, and whose lungs were perfectly healthy, but who was suffering from gangrene of the big toe of the left foot, due to femoral embolism. Amputation of the limb would not be submitted to, and, as a fatal termination was inevitable, a quantity of sputa from a man who had abscesses in his lungs was inoculated in the upper part of the left thigh. Three weeks afterwards, auscultation revealed very slightly increased respiratory murmur at the summit of the right lung, and somewhat prolonged expiration in the subclavicular region. Thirty-eight days after the inoculation, the man died from gangrene; and, on examination of the body, it was found that the upper right lobe had seventeen tubercles in the first stage of development, of a gray color, and very hard. Two granulations each were found in the left apex and upon the surface of the liver. From this unusual experiment, as states Fleming,* from whose paper we have freely abstracted throughout, "it is evident that tubercle is inoculable in man himself, for it is scarcely possible that this patient, who was fifty-five years of age, could have had his organs infiltrated with as many as twenty tubercles in the first stage of development only. Had they been naturally developed, they must have multiplied and passed through their regular evolution, especially in an individual predisposed to phthisis. Their limited number, stage, and size, afford a direct relation to the brief interval separating inoculation from the decease of the patient."

R. M. B.

(To be continued.)

CORRESPONDENCE.

IS FRACTURE OF THE PATELLA AMENABLE TO TREATMENT?

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I notice in the last issue of the *Medical and Surgical Reporter* an abstract in reference to the treatment of fracture of the patella at the Hôpital

Lariboisière, Paris, in which the practice of that institution is stated to be that "It does away with all apparatus, much to the comfort of the patient. The plan is simply to place the affected limb on an inclined plane, and to keep it steady by means of a few turns of a roller, without striving to bring the fragments together; a measure perfectly useless, as, whatever is done, the surgeon can rarely expect anything more than a fibrous union, which, after all, does not interfere with locomotion. What this plan studies to avoid is stiffness of the knee-joint, which so frequently follows prolonged immobility of the limb."

I am particularly impressed with the article, perhaps on account of the fact that some of my own remarks on fracture of the patella at a clinic of the Pennsylvania Hospital, intelligently reported by Dr. J. B. Roberts, are published in the same number of that journal, and because my practice and teaching are so diametrically opposite to those of the Hôpital Lariboisière. The article is, in my opinion, calculated to do harm by its teaching of such practice, endorsed by the influential authority of a prominent European hospital.

I have seen three instances in which fracture of the patella was left without further treatment than a state of rest to the limb; no attempt being made to secure mechanically the coaptation of the fragments. In one case the fracture was associated with other injuries, almost necessarily of a fatal character, but the patient survived for nearly three months. In another instance the fracture was complicated with severe injuries of the limb, which were attended with such great swelling that the fracture was not recognized until after the lapse of more than two months. In the third case the fracture was treated as a simple sprain, with rest alone, by a "homœopathic surgeon," and the patient came ultimately under my care on account of permanent disability of the limb, due to a separation of the fragments of not less than five inches.

In each of these cases the separation of the fragments remained far greater than I have ever seen it as the result of ordinary treatment in which approximation is effected as thoroughly as is usually practicable. These opportunities of observing the natural history of fracture of the patella do not incline me to favor such masterly inactivity in its treatment as is practised in the French hospital alluded to.

As to stiffness of the knee-joint following the mechanical treatment of fracture of the patella, I may merely remark that the resulting stiffness is due to the synovitis and other inflammation of the surroundings of the fracture, rather than to "prolonged immobility," which is not during a longer period nor more thorough than is necessitated in ordinary cases of fracture of the femur or of the tibia. In regard to "a fibrous union not interfering with locomotion," I know from practical observation that a *long* fibrous union, as is likely to result from such want of treatment as is the custom at Lariboisière, does interfere with normal locomotion.

While impressing the facts that much of the separation of the fragments in fracture of the patella is due to the

* George Fleming, "The Transmissibility of Tuberculosis," British and Foreign Medico-Chirurgical Review, No. cviii., October, 1874.

swelling of arthritis and bursal distention, and that coaptation cannot be effected until these conditions are subdued, I always teach methods of mechanically approximating the fragments as soon as may be practicable. With efficient mechanical treatment I have seen a number of cases in which, if true synostosis was not effected, the fibrous union was so short that no separation was appreciable.

After some experience with various mechanical contrivances for the treatment of fracture of the patella, I am convinced that the best results, with the most comfort to the patient, can be produced by the simple use of long strips of adhesive plaster and roller-bandages, and with either the limb elevated or the trunk kept raised, so as to flex that portion of the quadriceps muscle which has a pelvic origin. The strip holding down the upper fragment should be long enough to reach spirally down the leg, continuing even to the sole of the foot. In order to render the dressing very secure, several strips of adhesive plaster may be superimposed, so as to give strength and solidity. Strips passing in a contrary direction readily maintain the lower fragment in position, as there is no muscular influence tending to its displacement; and a roller-bandage, enveloping the entire limb, completes the dressing.

During some recent observation in European hospitals, including the Hôpital Lariboisière, I found no practice in the general treatment of fractures, to which we are in this country not accustomed, that is worthy of our imitation. On the contrary, the treatment of fractures in most European hospitals is often careless, unmechanical, and unphysiological. The most favorable exceptions to this condemnation I saw in one or two hospitals in London. From the general practice of the French surgeons in the treatment of fractures we have surely nothing to imitate. I saw, however, in some European hospitals a fair and creditable attempt at the introduction of what they term the "American methods" of fracture-treatment, particularly in the treatment of fracture of the femur.

I trust that the expectant plan of treating fracture of the patella will not be copied in this country; but if there be those whose fondness for and reliance on French authority must incline them to imitate, I would suggest to them the probability of involvement in litigation for malpractice, in suits in which their surgical brethren might not be able to endorse their practice.

R. J. LEVIS, M.D.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held October 14, 1874, at 8 o'clock P.M.

PRESIDENT, DR. WASHINGTON L. ATLEE, in the chair.

DR. O'HARA asked if any gentleman present could give him any instruction in the method of strapping the

chest in incipient phthisis. Surgeon McCrea, of the Belfast Dispensary, in the *Lancet* for July 18, 1874, recommends a process of strapping with emplastrum roborans. He states that there is a marked diminution of cough, cessation of pain, relief of dyspnoea, and a reduction of temperature by the repose thus given to the chest-walls. The patient at once expresses a feeling of great personal comfort. By repeated applications, once a fortnight, he would hope for brilliant results. When it became loose, the recurrence of the cough admonished the patient and his friends of the necessity of its reapplication. He has seen no account of its trial on this side of the water.

DR. WELCH stated that this subject would probably be brought before the Society during the winter in the form of a paper.

DR. H. C. WOOD called attention to a paper in the current number of the *British and Foreign Medico-Chirurgical Review*, which seemed to him to prove the contagiousness of phthisis, and remarked especially upon the fact, seemingly proven, that a stall will become affected so that healthy cattle placed therein will contract the disease. The bearing of this upon consumption-hospitals is very obvious. The moral and hygienic objections to such institutions are overwhelming, and should cause them to be entirely abandoned.

DR. LEE said that observations which had been made in the early history of the efforts to treat chronic affections by means of remedial exercises and localized movements had an interest in this connection from a negative point of view. As is well known, physical exercise is one of the most powerful agents for improving nutrition. We find it so in health, and it is not less so in ill health. Now, phthisis is, to a great extent, a disease of impaired nutrition. Hence it was concluded by enthusiastic investigators of this new method of treatment that movement would be just the thing for it. They began vigorously with such exercises as would tend to develop the chest and call into play the muscles of respiration. But they soon found themselves obliged to desist. Their patients grew manifestly and rapidly worse instead of better. They then adopted the alternative of confining their efforts to the muscles of the lower extremities; and by exercising them cautiously so as not to quicken the respiration, they found that they were able to avoid any such disastrous results as were at first observed, and in some instances to produce decided benefit. If, then, increased action of the thoracic muscles is injurious in this disease, it is a fair inference that enforced rest of these muscles, and hence, to some extent, of the subjacent lung-tissue, may be beneficial.

DR. ATKINSON thought this idea militated against the plan of "roughing it," so often suggested and urged upon consumptives. He was sure he had seen marked benefit from this plan in repeated instances, and mentioned a case which he had encountered in California, where horseback-riding the whole distance from New York City had acted in a highly beneficial manner.

DR. HAMILTON said the proposed new method for the cure or retarding the progress of phthisis was, as intimated by Dr. Atkinson, in singular contrast with the practice of physicians now or in earlier times. The late Dr. Joseph Parrish used to narrate in his lectures the history of a number of most striking cases illustrative of the great advantages of much out-door exercise in this disease. So, also, Dr. Benjamin H. Coates, when physician to the Pennsylvania Hospital, made it a point to recommend such of the consumptives as were quite able to take exercise to leave the wards of the hospital, assured that, in so doing, they would protract the issue of the malady. The propriety of this practice is confirmed by the experience of practitioners generally.

Dr. LEE said, in reply, that probably every member present could recall precisely similar cases to those which had been detailed, and that no one would be readier than himself to prescribe just this remedy in the earlier stages of phthisis. But "roughing it," in such cases, meant simply getting an abundance of fresh air; and fresh air, as we all agree, is the panacea in such affections. He believed, however, that just in proportion as our patients, while availing themselves of this invaluable remedy, avoid violent exercise of the muscles of the upper extremities, will they profit by it. In regard to the use of these muscles in horseback-exercise, which has often been found beneficial in phthisis, he would say that, in riding, the muscles which are brought strongly into play are the erector muscles of the spine and lateral muscles of the abdomen, which assist in preserving the equilibrium of the trunk, and the abductors of the thigh, with which the saddle is grasped. But one may ride all day without touching the reins or bringing the arms into powerful action.

Dr. O. H. ALLIS read a paper on Anæsthetics. (See p. 145.)

Dr. H. C. WOOD stated that he had been exceedingly interested in the very practical paper of Dr. Allis, but that he thought the difference of energy in the two agents was not the sole cause of the different mortalities following their use. The English Chloroform Committee years ago established the fact that in the animal, during chloroformization, the blood-force steadily falls from the very commencement, whilst during the anæsthesia of ether the arterial pressure rises and is maintained for many hours, only falling when the respiration is sensibly interfered with.

The same facts the doctor believed to be true in regard to man. When chloroform is inhaled, the pulse can often be felt to grow weaker, whilst after a few drafts at the ether-sponge the wave becomes fuller and stronger. For these reasons, whilst ether may be safely administered to a patient when standing, chloroform should never be given except to a person lying down. Ether stimulates the heart; chloroform paralyzes it. Ether kills through the respiration, by asphyxia; chloroform very often destroys through the circulation, by syncope. Upon these facts, rather than upon the comparative energy of the two agents, Dr. Wood conceives, rests the difference in the danger that attends their use.

Dr. Allis, being asked by Dr. Wood for the cause of death from chloroform, said that he had no theory to offer for its fatal action, other than the theories already familiar to the profession; that he had, however, watched and carefully studied the effects of the two anæsthetics upon himself, and a similar succession of phenomena was produced in every instance; that he was quite certain in his own mind that to a *greater anæsthetic energy*, rather than to any difference in kind, might be attributed the greater frequency of death.

Dr. W. GOODELL said that the paper of the evening was of great practical value, and that he, for one, felt himself under deep obligations to Dr. Allis for bringing up the subject of anæsthetics before the Society. He himself generally preferred ether, as being a more trustworthy agent, but he was now sensible of having made the very mistakes in its administration which had been so clearly pointed out in the paper. In future he should strive to avoid them by carrying out the mode of administration so ably advocated by Dr. Allis. In regard to the depressant effect of chloroform on the circulation, he was entirely in accord with Dr. Wood. Apart from crucial experiments, the method of resuscitating cases of threatened death—viz., by lowering the head and raising the body—so vividly described by Dr. Sims before the British Medical Association, goes to sustain this view. So also does an able paper

of M. Campbell, of Paris, in which he contends that the immunity with which parturient women inhale chloroform is owing to an antagonism between the effects of labor and the effects of this anæsthetic. Chloroform induces anæmia of the brain, but the throes of labor congest the brain, and, therefore, act as an antidote.

Dr. ATLEE desired to make some remarks on the position assumed by the lecturer with regard to the use of a combination of chloroform and sulphuric ether. For over twenty years he has been in the habit of administering it, and has never seen any bad results arising from its employment. He uses it in the proportion of two parts of ether to one of chloroform; and introduced this formula to the profession many years ago. It is not a mere mixture. A chemical combination occurs between the two fluids, and heat results in consequence of a condensation in the union of the two fluids, the same as when sulphuric acid and water are united. If it were a mixture, one would separate from the other; but the combination is permanent, as he has kept it unaltered for months. Dr. Atlee believes that the combined liquids vaporize simultaneously and in combination, and not independently and separately as is supposed. Although the boiling-point of ether is about half that of chloroform, and about one-third below that of water, yet the specific gravity of its vapor is about five times greater than that of water.

Dr. Atlee has frequently kept a patient under the influence of his anæsthetic an hour with one and a half ounces of the liquid. His method is to use a starched napkin, eighteen inches by twenty-four, folded lengthwise into three folds, embracing a *Ledger* newspaper, and then rolled into a cone and securely pinned. A few drops only of the liquid are dropped on the inner side of the cone, and the latter placed over the mouth and nose. No sponge is placed in the cone. Solid food is not allowed for twelve or sixteen hours before, and nothing for three hours previous to the administration of the anæsthetic. The patient, in a recumbent posture, is brought slowly under its influence, and the cone is removed on the least indication of heavy breathing. As he has used this combination between one and two thousand times without unpleasant symptoms, it is a matter of demonstration. He should be very sorry to see the use of chloroform forbidden by law. With regard to ether, Dr. Atlee stated that the lecturer had the day before yesterday administered it, by means of his apparatus, to a patient of his, on whom he had performed ovariectomy. He had never seen ether employed with greater pleasure and with better results. There was one effect, however, which, if constant, would render it inadmissible in ovariectomy. The muscles of the abdomen were not sufficiently controlled, and the intestines were forced out, so as greatly to impede the operation. The rigid muscles, after the removal of the tumor, had to be drawn aside by the hands of an assistant before the intestines could be replaced. The operation lasted forty-five minutes, and six ounces of ether were used. Dr. Atlee had used the bichloride of methylene on the recommendation of F. Spencer Wells, but found no advantages possessed by it over ether or chloroform.

Dr. Allis, in reply to Dr. Atlee, said that no one could witness the care with which Dr. Atlee prepared a patient for an operation, and not feel sure that any anæsthetic he would use would prove safe. He said that he was aware that the mixture of the two agents would remain unchanged while in a fluid condition; but the point of still greater moment was their behavior in the gaseous state. The fact that 96° Fahr. is the boiling-point of ether, while 142° Fahr. is the boiling-point of chloroform, must render the vapor given off from the mixture at an ordinary temperature an exceedingly changeable

one; and upon this condition alone he based his reasons for saying that the mixture was a dangerous one.

Dr. LEE said that he had used Dr. Atlee's mixture for many years without knowing to whom he was indebted for it. He had noticed this fact in regard to its preparation, which might have some bearing on the question of its being a true chemical combination: When the two fluids were poured together by the apothecary in a clean vial, the mixture very often presented a milky appearance, which appeared to him to indicate a failure to unite. He was then in the habit of requesting the apothecary to add a small quantity of pure alcohol to the mixture, say in the proportion of a drachm to three ounces, when the milkiness at once disappeared. In regard to Dr. Atlee's criticism on the lecturer's condemnation of this mixture, he had understood the lecturer to animadvert especially upon its reckless use by dentists while their patients were in the sitting posture. In this view of the question he thought too strong language could not be used, and he was sure that Dr. Atlee would be the last to wish to give the weight of his name to the impression that this combination was free from danger when used under such circumstances.

In reply, Dr. Atlee said that if pure concentrated or washed sulphuric ether is used, there will be no milkiness or cloudiness on mixing it with chloroform. Whenever the minute globules of chloroform can be seen floating through the ether on shaking them together, there is some fault with the ether, and a mixture, instead of chemical union, is the result.

Dr. O'HARA, in connection with the remarks of Dr. Atlee, who said he would not forego the use of chloric ether and chloroform unless compelled to do so, remarked that the moral responsibility of using chloroform and ether was very great. He thought the legal responsibility had already been fastened on us in view of the recent verdict of two coroners' juries in Boston, who seemed to be backed by the medical profession there; that medical men ought to be held to a criminal responsibility who used chloroform, which, in a certain number of cases, was death; whereas ether was considered to be harmless. He would also suggest, in reference to the danger in the use of chloroform, that some might use it with immunity. He had seen one person, who had been drinking freely, inhale and drink half a pound without inducing sleep. He must have been saturated with chloroform, as it was present in his vomit during the whole of the next day.

Dr. HAY is familiar with Dr. Atlee's mixture. He has used it for a long time, and has been present at many operations performed by Dr. Atlee for ovariectomy, when this mixture was given. Its use was followed by uniformly good results; it did its work well, and the patients recovered from its effects without an unfavorable symptom occurring.

In a recent case, in administering the mixture to a boy not quite six years of age, for the removal of an orbital tumor, it induced collapse three times, and he was obliged to discontinue its use and finish the operation with the patient under ether. In this case (the operation having been performed in a country town) there may possibly have been some fault or error on the part of the assistant in administering the mixture; but, at all events, the result was as stated. The operation was a painful one, the tumor being a large one, involving the removal of the eyeball and an extensive surface of periosteum, to which the tumor was attached. The time consumed in operating and resuscitating the patient was nearly two hours. The little patient made a rapid recovery, and is now well.

Dr. Allis being appealed to by Dr. O'Hara to explain why chloroform taken into the stomach was not so likely to prove fatal, said, "In the lungs we have four-ten hundred square feet of pulmonary mucous surface,

and over this entire surface the blood is spread out to favor rapid oxygenation. To this extensive surface the vapor of chloroform comes; while in the stomach, the chloroform in a fluid and gaseous state comes in contact with a comparatively small area."

Dr. KEYSER remarked that in 1865 he had the pleasure of being present at one of Dr. Atlee's operations, and then learned the doctor's mixture of chloroform and ether, which he (Keyser) continued to use for about four years, when, from having nearly lost three cases by it,—one a boy of ten years, on whom the operation for strabismus was made, another a boy of thirteen years, on whom an iridectomy was performed, and the other a man of thirty-three years, where the eyeball was enucleated,—the mixture was given up, and pure ether used since. He also mentioned that when he was assisting in the clinic of Prof. Von Langenbeck, in Berlin, in 1864, a somewhat similar apparatus to Dr. Allis's was used for chloroform. A single thickness of flannel was stretched across a wire frame, and the chloroform dropped on from a dropping-bottle.

Even ether has given him some trouble and worry. In one of his cases, lately, at the Wills Eye Hospital, a man some thirty years of age, after he was half under the influence, the breathing and pulse suddenly stopped, and it was with difficulty that the patient was resuscitated, after which the least particle of ether would cause a recurrence of the bad symptoms. His heart and lungs were found perfectly sound.

Prof. MCINTYRE, of Lafayette College, being present, was called upon for his opinion as to the chemical union between chloroform and ether. He said he would not be able to decide that question without experiment.

Dr. KEYSER said he had nearly lost three cases by the use of Dr. Atlee's mixture. He had been an assistant to Prof. Langenbeck, where a similar apparatus to the one described had been used.

Dr. DRYSDALE remarked that ether itself was not exempt from danger, as he himself had recently nearly lost a case from its use.

GLEANINGS FROM OUR EXCHANGES.

EXTIRPATION OF THE SCAPULA (*The London Medical Record*, October 21, 1874).—Dr. R. Schneider reports a case in which the left scapula was extirpated on account of a sarcomatous tumor. The first incision was made along the base of the scapula; the second was commenced at the acromion and carried horizontally along the upper margin of the tumor to the commencement of the first incision. A flap was thus formed, the free apex of which corresponded to the upper and inner angle of the scapula. The portion of tumor which projected beyond the upper margin of the bone was then exposed. The muscles attached to the inner and outer margins of the scapula were next divided. As the acromion, the neck of the scapula, and the acromial part of the clavicle had become involved in the tumor, it was found necessary both to open the shoulder-joint and to remove a portion of the clavicle. The deltoid muscle was cut through at its upper part, and the clavicle exposed and divided at an apparently healthy part. The articular capsule was now exposed, and the long tendon of the biceps muscles, and the tendons of the muscles inserted into the great and small tuberosities, were cut through. The articular capsule was then completely separated from the margin of the glenoid cavity. The axillary portion of the tumor was dissected out with great care, in order to avoid wounding any of the large vessels of this region. The tendons of the muscles attached to the coracoid process having next been dissected, the separation of

the tumor from the side of the thorax was easily affected. The supraspinatus, infraspinatus, and subscapularis muscles were wholly removed. During the operation, the subclavian artery was compressed against the first rib. A spray of carbolic-acid solution was played upon the wound during the operation. The vessels were closed by carbolized catgut, and the dressings were strictly according to Lister's plan. The operation lasted for little more than half an hour, and the hemorrhage was very slight; consequently there was no subsequent collapse.

The patient did well after the operation, and six weeks later was regarded as cured,—with a moderate amount of motion remaining in the left arm. Subsequently, however, the disease returned in the left shoulder near the cicatrix, and finally resulted in his death.

This is the nineteenth reported case of excision of the scapula with preservation of the upper limb. It was removed in two cases on account of caries, once on account of some obscure tumor, three times on account of enchondroma, once on account of an osteo-fibroid growth, and in thirteen cases on account of sarcoma or carcinoma. Of the nineteen subjects of these operations, one only died from the immediate effects. Two patients died from pyæmia, and one in consequence of bronchitis.

POST-PARTUM HEMORRHAGE—INJECTION OF PER-CHLORIDE OF IRON—TRANSFUSION—RECOVERY (*The Lancet*, October 24, 1874).—Dr. Edward Henderson reports a case of post-partum hemorrhage occurring in a lady who was rendered anæmic by prolonged lactation, and who had previously had two severe floodings.

After the delivery of the child and the detachment of the placenta, the uterus refused to contract in response to friction, continuous pressure, etc., and a large quantity of blood was lost. After some little delay, iced water was freely injected into the cavity of the uterus, into which a piece of ice was also pushed, and the vagina was filled with ice. Partly by this, and partly by well-sustained compression, the bleeding was at last arrested, and the uterus, regaining a portion of its lost force, contracted fairly. Brandy and champagne were from time to time administered to the patient. At the expiration of two hours and a half, however, the bleeding recommenced; oozing went on rapidly; her surface and extremities became cold and blanched, her breathing sighing and interrupted, her pulse feeble and intermitting. Twelve ounces of a solution of perchloride of iron were at once injected, with the effect of *immediately and finally checking the hemorrhage*.

Soup prepared from raw meat by the addition of hydrochloric acid and water was given, together with stimulants, but the patient's condition grew more and more alarming. Her breathing was labored and irregular; her voice a mere whisper; her pulse 130, very feeble and intermitting. She said she was dying.

A saline solution containing about two drachms of pure alcohol was then injected into a vein by means of an apparatus acting on the gravitation principle. The change in the patient's condition which followed the operation was no less rapid than wonderful, the marked improvement in pulse, breathing, and general appearance making the prognosis much more favorable. Two hours later, however, all the bad symptoms returned, and her state was, if possible, worse than before. Twelve ounces of blood were then taken from her husband, were strained and defibrinated, and were injected through the same orifice by the same apparatus. The result was favorable beyond the most sanguine anticipations. The pulse once more filled and steadied, the breathing became full and regular, and by slow degrees warmth returned to the extremities. This improvement was permanent; the reactionary fever,

though marked, was moderate, and the patient completely recovered, with no untoward symptoms.

REST IN THE TREATMENT OF CHOREA (*The Chicago Journal of Nervous and Mental Disease*).—Dr. Ransom Dexter reports the case of a girl, æt. 13, whose health was impaired by hard study at school, and who finally became choreic. The treatment at first adopted consisted in the administration of extract of valerian and cimicifuga twice a day, the elixir of pepsin, bismuth, and strychnia before each meal, and bromide of potassium and cannabis indica at bedtime. In a few days she grew worse, and some malarial periodicity was noticed. It was then decided to try cautiously small doses of quinine and iron, but when only four grains of the former had been administered the following symptoms ensued: hemiplegia of the left side, dilatation of the pupils of both eyes, some choreic movements during sleep, increasing so much when awake that the patient was unable to sit up, but had to be held down on the bed or lounge. In reviewing the case, which had then become very serious from the general failure of the vital powers, Dr. Dexter arrived at the following conclusions:

1. That all the sensorial ganglia, or the centres for the nerves of the separate senses, were more or less affected; and that the sensori-motor centres were the special seat of the disease.

2. That the pathological condition could not be other than an asthenic irritation of the sensori-motor organs.

3. That these organs must have physiological and therapeutical rest.

Carrying out these ideas, he ordered the patient to be kept in a darkened room; to lie as still as possible upon a lounge; to be waited upon only by her parents, who were to maintain the strictest quietude; and to be positively silent herself. In addition, the valerian, cannabis indica, and bromide were continued, with an occasional cathartic to act as a revulsive. In eight hours a noticeable improvement had ensued, and in twenty-four hours had become very decided. In six days all choreic movements had disappeared.

THE VENOM OF THE SCORPION (*The London Medical Record*, October 21, 1874).—M. Jousset de Bellesme records, at some length, researches on the venom of the scorpion, and gives the following description of its situation and the mode of its ejection:

The poison-apparatus of the scorpion is lodged within the sixth and last caudal segment [probably the homologue of the mesial element, or "telson," of the last segment of the tail of a macrourous crustacean, e.g., a lobster, or crawfish.], which is of a rounded flask-like shape, and terminates in a horny blackish dart, recurved and very sharp. Within the ampulla are contained two little glandular sacs, communicating by a common duct, which extends into the dart to terminate near its point by two longitudinal slits, which are somewhat difficult to see. It is through these that the venom is injected, by the aid of the contraction of muscular fibres, which invest the glandular saccules. In its natural attitude the tail of the scorpion describes a curve; but when the animal imagines itself to be completely sheltered against all dangers, it rests on one side or on the other, upon the ground. It is by a sudden extension of the tail that the dart, after being first brandished over the head of the scorpion, is launched against the body of the victim; and, however small be the prey, it is never brought to the mouth until it has been pierced by the sting. This is a measure of precaution; and that it is not an inherited instinct, but is probably acquired by bitter experience, the following instance will show. M. de Bellesme gave one day to a captive scorpion, which he had hitherto been feeding upon flies, a spider of the size of a pea.

The scorpion, having seized its prey with its chelæ, stung it *en règle*, but, probably owing to some flow of blood, the poison took no effect. The spider, *sic ut mos*, feigned death, and as the scorpion, deceived by this *ruse*, was about to transfer its prey to its mouth, the spider suddenly buried its "mandibles" in the base of one of the chelæ of the scorpion. The latter stung its victim anew, and this time with effect, but had scarce time to enjoy its victory before it began to show signs of discomfort, and was afterwards seized with tetanic spasms, from which it did not recover till the following day, when it ate a fly with good appetite. The scorpion always attempts to sting its prey in the thorax, death taking place much more rapidly when this site is luckily hit upon, the rapidity of its access being in the inverse ratio to the size of the victim.

MISCELLANY.

ORIGIN OF THE TRANSFUSION OF BLOOD.—The following paragraph is taken from Villare's "Life of Savonarola," and is perhaps the earliest recorded case of the operation of transfusion:

"The vital powers of Innocent VIII. rapidly gave way; he had for some time fallen into a kind of somnolency, which was sometimes so profound that the whole court believed him to be dead. All means to awaken the exhausted vitality had been resorted to in vain, when a Jew doctor proposed to try to do so by the transfusion, by a new instrument, of the blood of a young person,—an experiment that had hitherto only been made on animals. Accordingly, the blood of the decrepit old pontiff was passed into the veins of a youth, whose blood was transferred into those of the old man. The experiment was tried three times, and at the cost of the lives of three boys, probably from air getting into their veins, but without any effect to save that of the Pope. He expired on the 25th of April, 1492, and without loss of time they set about the election of his successor."

DEATH FROM SMOKING.—The case is reported in France of a young man who perished in attempting to smoke twelve cigars for a wager. At the eighth cigar he began to feel uncomfortable, at the ninth he had chills and dizziness, which became more severe with the tenth. He still refused to stop smoking, but consented to go home with two of his friends. He was then attacked with vomiting and pain in the abdomen, and, in spite of professional assistance, he died in the night. It should be stated that the heart was hypertrophied.—*Boston Medical and Surgical Journal*.

THE CARRIER PIGEON.—The travelling pigeon never feeds. If the distance be long, it flies on without stopping to take nutriment, and at last arrives thin, exhausted, almost dying. If corn be presented to it, it refuses, contenting itself with drinking a little water and then sleeping. Two hours later, it begins to eat with great moderation, and sleeps again immediately afterwards. If its flight has been very prolonged, the pigeon will proceed in this manner for forty-eight hours before recovering its normal mode of feeding.—*L'Union Médicale; Medical Times and Gazette*.

NOTES AND QUERIES.

3729 LOCUST STREET, WEST PHILADELPHIA.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

MR. EDITOR,—It is an old saw, that "one must go away from home to learn the news." I translate from the Portuguese the following article found in the *Carreio Paulistano*, which speaks for itself:

"SERVICE TO HUMANITY.—Two patients, one with stone in the bladder and the other with one in the kidney, who are in a hospital in Philadelphia, are being submitted to treatment by distilled water. Distilled water, according to the general belief of men of science, has a great solvent power.

"Dr. Moore (?), before proceeding to the operation of lithotomy upon the patient with stone in the bladder, ordered about half a pint of cold distilled water to be given to him an hour and a half before meals. The first effects of the experiment promising good results, Dr. Moore applied the same treatment to the other patient.

"Both of them expelled much very fine sand, and it was judged the concretions which affected them were being dissolved, because their pains had very much diminished. If Dr. Moore should obtain the results desired, he will do a great service to humanity. The treatment is simple, but should be methodical and prolonged."

Also this, from the *Gazeta de Camfmas*:

"We have been favored with the thesis which was presented and defended before the Faculty of Medicine of Rio de Janeiro by our fellow-provincial, William Ellis, a Doctor by the University of Pennsylvania in the United States.

"The subject of his essay is entitled 'Emphysema of the Liver,' into a discussion of which we shall not enter now, not only on account of our incompetency, but because this is a subject upon which men of science maintain silence, and about which there is much controversy. Dr. Guilherme Ellis was *aprovado plenamente* by this Academy of the Empire, and proved his perfect preparation for the exercise of the noble profession of a physician in Brazil. We hope ardently for his prosperity."

It is worthy of notice that of three European graduates examined at the same time, one was rejected, and two *aprovado simplesmente*, the inferior grade to that accorded to Ellis; which facts are rather rough for the theories of the editor of the *Times*.

Yours,

DR. W. H. WINSLOW.

It seems a matter of sheer impossibility to make one's self understood. We have no especial theories upon the subject of medical education, but we have asserted and reasserted the following facts emphatically: to these we suppose Dr. Winslow refers in his closing sentence:—that this city offers the greatest advantages to those desirous of studying medicine deeply, but that such study is not necessary to obtain a diploma; that the real student will find here almost everything he wants, excellent teachers, abundance of clinical material, large libraries, a union of facilities very probably greater than exists in any other city in the Union,—but that the diploma is no *proof* that the possessor has availed himself of these facilities; the graduate of one of our schools is often a brilliantly educated man—but perhaps as often he is a blockhead, or at least an ignoramus.

The case of Dr. Ellis is in close concord with all that has been editorially written in the *Times*. We had the pleasure of knowing Dr. Ellis as an earnest, intelligent student, taking advantage of every opportunity, and, after graduating, serving with distinction as interne in one of our hospitals. Of course he passed a brilliant examination when he returned home. Such Philadelphia graduates we would back against the world.

W.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Philadelphia County Medical Society will be held December 9.

Dr. H. C. Wood will lecture on the Use of Electricity in Paralysis.

All regular practitioners of medicine in the city are invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM NOVEMBER 24 TO NOVEMBER 30, 1874, INCLUSIVE.

MAUS, L. M., ASSISTANT-SURGEON.—Assigned to duty at McPherson Barracks, Atlanta, Ga. S. O. 191, Department of the South, Nov. 25, 1874.

SATURDAY, DECEMBER 12, 1874.

ORIGINAL COMMUNICATIONS.

THE AGE OF WOMEN WHEN THE CAPACITY FOR CHILD-BEARING CEASES.

BY FORDYCE BARKER, M.D.,

Professor of Clinical Midwifery and Diseases of Women in the Bellevue Hospital Medical College, etc.

Read before the New York Medical Library and Journal Association, November 20, 1874.

THE period when the capacity for child-bearing ceases in women is often a subject of medico-legal inquiry; yet, up to the present time, the question is left very loose and undetermined in the standard works on medical jurisprudence. I have several times been called upon to give an opinion on this point, and in this paper I shall give my reasons for expressing the belief that the limits of the capacity for conception and gestation in women can be defined with sufficient accuracy to warrant the medical expert in the expression of a positive declaration. Yet so many wonderful and apocryphal stories may be found in the medical literature of the past, which can be and often are quoted as disproving the accuracy of such a declaration, that it seems important to settle the question whether science can pronounce with authority that such pretended facts must be false. A zealous advocate, who feels that the interest of his client warrants him in bullying, by a rapid series of questions, in a loud tone of voice as if to intimidate from lying, may irritate and embarrass a medical witness to a degree that will destroy the force of a well-considered and sound opinion. For example, the medical expert is asked such questions as the following: "Do you set yourself up as an authority on this subject? Did you ever hear or read of Haller, one of the greatest lights in medicine that has lived in any age? Do you think that he made a false statement when he declared that he delivered one woman in her sixty-third and another in her seventieth year? Do you know anything of Tilt and Tanner as medical authors? What is your opinion of them? Now, will you say on your oath that they lie when they assert that Haller states that he did deliver two women at these ages? Did you ever hear of Dr. Benjamin Rush, one of the signers of the Declaration of Independence? Do you not think him rather a respectable man, who would be likely to speak the truth? Then are you ready to swear that he did not when he says that Ann Woods married after she was sixty years of age and gave birth to a child ten months afterwards? Did you ever hear of such a work as Beck's Medical Jurisprudence? Do you pretend that T. Romeyn Beck in this great work states an untruth when he declares that Ann Cook, of Whitehall, in this State, at the age of sixty-four had a child, born in February, 1836?"

A thorough knowledge of the literature of the subject and of the physiological laws which must govern it, an imperturbable temper, and great care in giving

direct and simple answers to direct questions, and in avoiding the appearance of being a partisan advocate, will best protect the medical witness from the confusion and embarrassment of a false position.

Casper states "that every year cases come before us in which it is judicially inquired whether an aged woman, in her present marriage, or in a second one about to be entered into by her, may yet probably have children. Usually these are women approaching their fiftieth year, if they are not already far beyond it, and who have for long ceased to menstruate."* I suppose this question is a subject of judicial inquiry much less frequently in this country; yet every physician is liable to be called upon to testify in regard to this point. In two instances I have reason to believe that an opinion which I prepared at the request of eminent members of the legal profession served to avert scandalous litigation. In a third case, a woman said to be of weak mind and a confirmed opium-eater, wealthy by the rise of real estate in this city which she inherited, married a second husband when she was forty-nine years of age. She had no children by her first husband. At the age of fifty-eight she asserted that she was pregnant, and persisted in this assertion for nearly a year. Subsequently her husband and herself declared that she gave birth to a child, while in the country, during the summer, and a nurse and two other women were ready to swear to it, no physician being present at the time of the birth. Three months after this alleged delivery she was one morning found comatose, and died a few hours after, the death being reported as due to apoplexy. The following summer the child died from cholera infantum. The husband claimed the property which she left, as heir to her child. This claim was contested by two nephews and the husband of a niece of the woman. The counsel for the contestants submitted to me a great array of medical opinion, which purported to show, from numerous examples found in medical literature, that women over fifty-eight years of age have given birth to children. Before the case came to trial, conclusive evidence was found to establish the fact that the nurse, and not the old woman, was the mother of the child in question.

Within the past year I have been called upon to give testimony in a case involving a very considerable amount of property, the case turning upon the point whether it be possible for a woman after her sixty-seventh year to conceive and give birth to a child. It was with regret that I felt it my duty to give an opinion, and my reasons therefor, adverse to that of several of my respected confrères.

My object in the present paper is to show that physiology and experience have determined the limits of the reproductive functions in women. It is generally assumed that the duration of the child-bearing capacity is coincident with the duration of menstruation. Most writers on forensic medicine, and most medical witnesses in the cases in which

* Forensic Medicine. The New Sydenham Society, London, vol. iii, p. 263.

I have been engaged, have referred to the numerous examples of menstruation prolonged beyond the usual periods of life as evidence that such women are capable of impregnation and gestation.

While it is generally true that when menstruation ceases the ovaries are no longer capable of furnishing mature ova for fecundation, and the uterus no longer has the power of retaining and developing an ovum, yet, on the one hand, thousands of sterile women menstruate regularly and normally, while, on the other hand, there are great numbers of women who have conceived before they have menstruated, and others who have given birth to a child some years after menstruation has ceased. Many cases, whose authenticity is beyond question, can be found in medical literature which demonstrate the truth of both assertions. I can furnish such which have come under my personal observation.

A lady in perfect health, except that she never had menstruated, was married at twenty. In the ten years following her marriage, I attended her in eight confinements. In 1870 I received a letter from her written in Switzerland, where the family have been living for some years for the purpose of educating their children, saying that she had not been exposed to the danger of having more children since the birth of her last child, then six years old; but that her husband was endeavoring to persuade her that she must be now safe, as she never had been unwell. I wrote in reply that, as she never had menstruated before the birth of her children, I regarded her as an unsafe subject for me to commit myself to an opinion on this point.

Another lady in this city, previous to her marriage, menstruated very scantily and irregularly. But in the twelve years since her marriage she has never menstruated, but she has given birth to ten children, and she is still keeping up her good work.

As an example that conception and gestation may occur some years after menstruation has ceased, I will mention the case of a lady in this city who had borne five children, the last at the age of thirty-eight. She ceased to menstruate at forty-two. Her health had previously been delicate, but she now became strong and well, and increased in weight over thirty pounds. When more than forty-six, I was asked to examine her, as she had felt many of the usual symptoms of pregnancy. I expressed the opinion that she was five and a half months pregnant; and my diagnosis proved correct, as in due time she gave birth to the finest and largest child that she had ever borne. In this case there was no motive for deception, and the result was a matter of family pride and rejoicing.

In November, 1851, I was invited by Professor Willard Parker to see a very curious and interesting case, which had been examined by several obstetricians. A woman, whose character was good so far as known, five years a widow, represented her age as forty-seven, and that she had not menstruated for three years. An abdominal tumor could be felt, reaching to the level of the umbilicus. An incessant convulsive movement of the abdominal integuments and muscles (phenomena sometimes, but rarely, associated with pregnancy, described by

Velpeau,* but hardly alluded to by any other obstetrical writer) rendered obstetric auscultation quite impossible and abdominal palpation wholly unsatisfactory. The mammary signs of pregnancy were negative. This woman gave birth to a child, supposed to be a little premature, the following March, and soon after died of puerperal fever.

Ovulation and menstruation, although often coincident, do not necessarily bear the relation of cause and effect, as has been supposed by many. Ritchie† and others have demonstrated by autopsies that ovulation does not always occur at the time of menstruation. Peaslee‡ remarks, "There is no proof and no probability that ovulation produces true menstruation. Certainly, ovulation, and even parturition, occurs in some women who have never menstruated. Menstruation is therefore an accidental and an incidental rather than an essential function, and it has no analogue in most of the lower animals. In itself considered, it is merely a flow of blood at stated periods from the interior of the uterus, irrespective of its connections and its causation."

Ovulation is absolutely an essential function for conception and gestation; but menstruation is not. Hence the numerous cases reported by medical writers, and quoted in works on medical jurisprudence, of a regular recurrent sanguineous flow from the genital organs in women over fifty-five years of age, no more demonstrate the possibility of conception in such women than does the same apparent menstrual discharge in women who have had both ovaries removed, of which there are several authentic cases.

When that physiological process takes place known as senile atrophy of the ovaries,—that is, when the ovaries diminish in volume, shrink up, and become wrinkled, the Graafian follicles disappear, the stroma becomes dense and non-vascular,—then ovulation ceases, and conception and gestation are no longer possible. All physiologists are in agreement in fixing the period of this change in woman as between forty and fifty. In a very exceptional number of women this change does not take place until one, two, three, or even four years later. This is proved not only by thousands of autopsical examinations, but also by the fact that not a single authentic case is known, of the slightest scientific value, where a woman over fifty-five years of age has given birth to a child, with the exception of Sarah, the wife of Abraham, in biblical history. Abraham was one hundred and Sarah was ninety years old when Isaac was born; and it is said "it ceased to be with Sarah after the manner of women." It is not surprising that Sarah, when she heard the announcement of her future pregnancy, "laughed within herself, saying, After I am waxed old shall I have pleasure, my lord being old also?" According to Scott's Commentary, "the name Isaac signifies laughter, and this child of promise was so named in remembrance of Abraham's believing and Sarah's unbelieving laughter."

From the time of Pliny down to the present day,

* Meigs's Velpeau's Midwifery, Phil., 1852, p. 397.

† Ovarian Physiology and Pathology, London, 1865.

‡ Ovarian Tumors, New York, 1872, p. 599.

there have been many cases reported in medical literature and quoted in works on forensic medicine, where women from fifty-eight up to eighty years of age are said to have given birth to a child.

But in a scientific inquiry I hold that we are bound to reject all statements which are opposed to the universal experience of mankind, when the probabilities against the truth of the assertion are at least as a million to one, unless it be supported by such evidence as would be regarded as conclusive in a court of law. Some of these reported cases have their only foundation in either tradition, travellers' tales, common rumor, or an anonymous paragraph in a newspaper or a magazine. Others again arise from a misquotation or a perversion of the original statement. The limits of this paper will not permit me to trace to the original source and analyze all of these cases, but I will briefly examine those which seem to have been accepted generally by writers on medical jurisprudence and by some recent obstetrical writers.

One of the earliest cases alluded to by many is given on the authority of "Pliny the Naturalist." Montgomery* says, "Pliny records the case of Cornelia, of the family of Scipio, who at the age of sixty bore a son, who was named Volusius Saturninus." Tilt† makes a somewhat different statement, as follows: "Cornelia was confined of Valerius Saturninus in her sixty-second year." It is sufficient to say, in regard to this, that the eldest child of Cornelia was born 163 B.C., and that Pliny was born 23 A.D. Consequently, one hundred and fifty years at least must have elapsed from the time of this extraordinary birth to the time when Pliny wrote; and, as he gives no documentary evidence in proof of his statement, it is safe to infer that it was derived solely from tradition.

Numerous writers assert that Massa, a physician of Venice (the name is variously spelled when quoted, as Marsa, Marra, Mansa), says "that he treated a woman for dropsy, who was really pregnant, he being deceived by her age, which was sixty." The writer referred to must be Nicholas Massa, of Venice, who died 1569. In his work,‡ in the "Epistola de aqua cutem seu hydrop," he speaks of a case in which a woman of sixty was treated for dropsy when she was pregnant, but he does not say that he was personally cognizant of the fact.

Many obstetrical and forensic authors refer to Valescus de Tarenta as "mentioning a woman who continued to menstruate beyond sixty, at which age she bore her last child." Valescus de Tarenta was a native of Portugal, born in 1382, and practised medicine in Montpellier, France. His work, "Practica quæ alias Philonium dicitur," can be found in that remarkable and valuable collection of medical books, the library of the New York Hospital, and perhaps some one who can read mediæval Latin with facility may take the trouble to ascertain exactly what he did say.

The weight of the great name of Haller has been

invoked in proof of the fact that women of advanced age have borne children. I find in many of the standard writers on this subject the assertion that "Haller delivered one woman in her sixty-third and one in her seventieth year." This curiously illustrates how books are filled with hasty, erroneous, and perverted quotations, for there is no evidence that Haller ever practised midwifery. He was born in Bern, 1708. In 1735 he was appointed physician to the hospital in his native town, but in 1736, when he was twenty-eight years of age, he was made a professor in the University of Göttingen, and from this time he gave up the practice of his profession. All that Haller ever said in his writings on this subject is as follows: "Women have been seen to bring forth in their fifty-fourth year, fifty-eighth, sixtieth, sixty-third, seventieth, and among my relatives was a child-bearing matron whose two sons born after their mother's fiftieth year, chosen into the senate, are living at the time of my writing this."§

Capenon is often quoted as an authority that women of an advanced age have borne children. But the only personal statement which he makes on this point is "that in Paris it passes for true that a woman in the street *La Harpe* gave birth to a daughter at the age of sixty-three."|| On which Casper makes the following comments: "Those acquainted with Paris well know the class of people living there: small shop-keepers, tradesmen, and the like. Are these observations possessed of the slightest scientific authenticity?"¶

The case of Ann Woods, who is said by Dr. Benjamin Rush "to have given birth to a child after she was sixty years old," is often referred to; but the evidence of the truth of the story rests entirely upon the assertion of the old woman herself, "who called at his house to beg for cold victuals," and at this time she claimed to be ninety-six.**

Another famous case, often quoted, is that of Ann Cook, of Whitehall, who is said to have had a child at the age of sixty-four.†† This story originated in an anonymous communication to the *Boston Medical and Surgical Journal*,‡‡ and is entirely unsupported by any evidence.

I think it wholly unnecessary for me to refer to various other reports of aged women who have given birth to children, which rest solely on paragraphs in newspapers and magazines, as these are of no scientific value.

After the most careful and laborious research, I can find but one authentic case, based on the evidence of a respectable medical man, who carefully investigated the documentary proof of the fact, where a woman who has reached the age of fifty-five has given birth to a child. This case is reported by Dr. Davies, of Hertford, England.§§

‡ *Elementa Physiologiae*, Bernæ, 1765, tomus vii. pars ii. p. 141. I give the passage in the original, with the authorities which Haller cites: "Pepersisse visæ sunt feminae anno 54(c), 58(d), 60(e), 63(f), 70(g), et inter consanguineas meas fuit patritia matrona, cujus duo filii post quinquagesimum matris annum nati in senatui adlecti supervivunt dum hæc scribo." (c) Eph. Nat. Om., vol. vii. obs. 85. (d) Hist. de la Chirurg. (e) Plot. Natur. Hist. of Oxford. Valesc. de Tarenta. (f) Plot., Wallace, p. 64. (g) Salmut, Cent. iii. obs. 59.

§ *Médecine Légale*, Paris, p. 93.

¶ *Forensic Medicine*. The New Sydenham Society, vol. iii. p. 260.

** Rush's Essays, Philadelphia, 1798, p. 301.

†† Beck's Medical Jurisprudence, 10th ed., p. 246.

‡‡ Vol. xiv. p. 79. §§ London Medical Gazette, vol. xxxix.

* *Cyclopædia of Practical Medicine*, London, vol. iii. p. 491; also Montgomery on Pregnancy, Phil., 1857, p. 260.

† *Change of Life*, 2d ed., London, p. 18.

‡ *Epistolæ Medicinales*, Venet., 1549.

There are a considerable number of cases which must be accepted as authentic, as the evidence is conclusive, that women between the ages of fifty and fifty-four have borne children. I have personally known three women over fifty years of age who have become mothers. One case, which came under my observation, is so curious that I may be pardoned for relating it, as it is well known to many now living in this city.

May 6, 1852, I attended a case of labor in St. Mark's Place, in consultation with the late Dr. Robson of this city. The labor was normal but tedious, and our patient was delivered of a daughter by the aid of the forceps. This lady had been married twenty-seven years, and this was her first pregnancy. After the birth of the child, the husband showed to Dr. Robson and myself a family Bible, in which the birth of his wife was recorded as having been May 5, 1801.

July 3, 1853, Dr. Robson having died, I attended this lady in her second confinement. The mother and both daughters (now married) are still living.*

The question as to the age when the capacity for child-bearing ceases has been frequently brought before courts of law. In one instance only, so far as I can learn, it was decided that this is possible at the age of fifty-eight. François Fajat claimed an estate as heir to his mother. His claim was resisted on the ground that, according to the baptismal registry, his mother could not have been the legitimate heiress through whom the claim accrued, because her alleged mother would have been in her fifty-eighth year, and this, it was contended, was beyond the age of child-bearing. The court referred the case to the Academy, who, from the "Annals of Medicine," produced the apocryphal cases which I have before examined. The court admitted the legitimacy on the grounds that *menstruation* and conception had been known to occur at periods even later than this.† This was in Paris, in 1754.

The legitimacy of the claimant in the famous Douglas Peerage case, whose alleged mother at the time of his birth was in her fiftieth year, was decided in his favor. Until within a recent period, the English law has admitted "no presumption as to the time when a woman ceases to have children, though this enters into most other codes."‡ But at the present time the fact is otherwise. In the English Court of Chancery, the succession to a large property depended entirely on the question whether a woman at sixty years of age might have a child. The Attorney-General, Sir William Horne, stated that there was no such case satisfactorily recorded; and he offered to give up his client's title if any credible evidence could be produced in sup-

port of an instance. But, as none was brought forward, he was deemed to have succeeded in proving his claim.§

The English Court of Chancery seem now to have arrived at a definite conclusion as to the age at which a woman may be presumed to be past child-bearing. *In re Widows' Trusts*, Vice-Chancellor Malino made an order for payment to two ladies respectively. One of the ladies was a widow, past fifty-five, the other a spinster, aged fifty-three years and eight months. In both cases the parties were entitled absolutely, subject to the contingency of having children.||

In *Forty vs. Forty* (Feb. 1853), Vice-Chancellor Kindersley decided that an unmarried lady aged fifty-three might be presumed to be beyond the age of child-bearing. Taylor remarks, "The question may be considered definitively settled. A woman who has passed the age of fifty-three is presumed in law to be past the age of child-bearing."¶

I am not aware that this question has ever been judicially settled in our American courts. But, in conclusion, I feel warranted in stating the proposition that the laws of physiology, the experience of mankind, and the decisions of courts of law, justify a medical witness in declaring that a woman over fifty-five years of age is past the period of child-bearing.

TETANUS NASCENTIUM.

BY W. H. WINSLOW, M.D.

A WELL-DEVELOPED, rosy, hearty male infant, six days old, awoke at midnight, screaming, and the mother, in attempting to quiet him, found that he could neither hold on to, nor nurse from, the nipple; and, upon further examination, she discovered that the child had its lower jaw fixed, and its limbs rigid. The mother and several "old women" worked with him during the remainder of the night and the following day, trying to force down breast-milk, teas, and cure-alls, without success. Everything flowed from the mouth, and spasm after spasm finally awoke a spasm of sense, and started them after a doctor. I saw him at 6 P.M.

The women reported that the child had been delivered by a midwife, had had proper urinary and fecal evacuations every day, and had been perfectly well up to the time of the sudden nocturnal attack.

The parents occupied a very small room, with one window and door, in the second and upper story of a house upon the southwest side of which the heat on that July day was very oppressive, even after sunset. The perspiration ran from my face in streams while I made the examination. In this room had occurred her accouchement. Below was a low grog-shop; around the house the gutters were full of stinking slops and kitchen débris, and the Schuyl-

* The husband, whose age was fifty-four when his first child was born, was for many years captain of a New York and Liverpool packet-ship. I asked him how he explained the curious fact that his wife had now for the first time become a mother. His answer was that "he had followed the sea for many years, until he had got money enough to live as comfortably as he wished, when he concluded to stay at home and 'tend to his family duties.'"

† Devergie, *Médecine Légale*, tom. i. p. 435; also Capenon, *Médecine Légale*, p. 93.

‡ Beck's *Medical Jurisprudence*, vol. i. p. 653.

§ Tanner, *Signs of Pregnancy*, London, 1860, p. 18; also *London Medical and Surgical Journal*, vol. iii. p. 687.

|| 40 *Law Journal Rep.*, N. S., 380.

¶ Taylor's *Principles and Practice of Medical Jurisprudence*, London, 1873, vol. ii. p. 306.

kill, at no great distance, hinted of malarial influence. The dietetic supplies for the mother were coarse and inappropriate, and she, having passed her labor without mishap, had abandoned her bed on the fifth day. She was a blonde, with freckled, sallow, pock-marked face, and large blue eyes, of medium size, tolerably well developed, but one whose form, bride as she was of a year, spoke of tangents and secants,—*i.e.*, angular. Her age was twenty-two years.

The husband, one year her senior, was of medium size, brown hair and eyes, and most powerfully developed,—a condition which his labor as carter promoted and maintained. His health was perfect, but he had lost several fingers of his right hand by a circular saw in March, which accident had greatly shocked and distressed his wife,—then five months pregnant,—and had diminished their resources somewhat.

The first thing that attracted attention to the patient was the peculiar facial expression, and the intensely congested condition of the whole surface of the body. The skin was dry and hot. He lay upon his back, with head retracted, and eyelids so firmly closed as decidedly to resist attempts to separate them. The pupils were dilated, and did not respond to light; the lips were pressed firmly against the gums, making the mouth a slit about a quarter of an inch wide in the middle; the corners of the mouth were slightly drawn downwards, the tongue was pressed between the gums anteriorly, and foaming saliva filled the aperture, constantly flowing inwards and outwards during inspiration and expiration.

The lower jaw was so firmly fixed by its muscles that I could not move it by exerting all the force I dared to use. A space existed between the gums just sufficient to permit the introduction of the end of my index-finger. It seemed just wide enough to contain the teeth, had they been developed.

The patient's bowels had not been moved for eighteen hours, and he had not taken any nourishment since the beginning of the attack. The nostrils were dilated and immovable. The arms were drawn inwards, so that the elbows were within the marginal line of the body and could not be drawn outwards by the exercise of much force; the forearms were strongly pronated, flexed at an angle of 130° on the humeri; the hands were slightly extended, abducted, and brought nearly together at the middle line, with the fingers clenched and the thumbs *outside* of the fingers. This position of the thumbs is normal during the latter part of intra-uterine life, and is not departed from during the earlier weeks of external existence, because it requires time for the flexors to relax from their constrained ante-partum condition, and for the extensors to gain power to overcome them and produce equilibrium. The positions of the arms reminded me strongly of the pugilistic attitudes of children when they first mimic their elders.

The thorax was elevated and rounded, as at the end of inspiration, and remained so; while the abdomen was projected and tympanitic. The thighs were only slightly flexed on the pelvis, and

the legs on the thighs. The feet were extended extremely, and strongly abducted, and the inner malleoli were almost in contact. The great toes were abducted from the other toes, which were flexed, but their first phalanges were extended on their metatarsi.

Some one has said that the arm should be studied with the palm upon the ground, and pronated, in a position representing the fore-leg of a quadruped. If this patient's arms had been so placed, we would have found, upon comparison with the legs, that corresponding groups of muscles in the two members were affected in like manner and degree, and that in those groups which are most used and most powerful in life the tension seemed greater, while, all the muscles being contracted, the positions of the bones (other things not interfering) indicated the balance of power,—the resultant of all the forces.

The muscles were everywhere in tonic contraction, yet every moment there would occur a quick jerk, a letting-go-and-taking-hold-again movement, apparently from renewed nerve-irritation, which caused more rigid tension. If this movement were to be represented in diagram, it would not differ much from that of the healthy pulse as indicated by sphygmographic tracings. The infant's respiration was 50 per minute, very short and superficial; the expiration instantaneous, and he struggled for breath with his lungs full of air, like a patient with severe emphysema. The pulse was 140 per minute, thready, or, rather, corded, and distinct. He could not close his lips around the nipple, or swallow any liquid from a teaspoon, and every attempt with either only increased the violence of the spasms. He cried in an irregular whining manner, and remained in the spasms for ten minutes. Upon examining the umbilicus, the cause of the mischief was immediately apparent. There existed a hernia about the size of an English walnut, with thin walls, much congested, the redness forming an areola around the retracted and inflamed cicatrix of the funis. Pressure applied to the umbilicus only elicited most distressing cries and a more rigid contraction of the muscles. From careful examination I felt certain that the inflammation extended along the vessels of the cord inwards. Upon reducing the hernia, the spasms ceased immediately; and upon letting the projection occur again it immediately supervened. Here was an important fact in reference to the etiology of the disease, as well as a hint to the doctor. I kept the hernia reduced, and put him to the breast. The moment his lips were pressed against the moist nipple, the spasm returned again. A salt-and-water injection brought away a yellow stool of moderate quantity; a warm bath was given; the umbilicus was dressed with cerat. plumbi and carbolic acid upon a pad, kept in place by a bandage, to keep the hernia reduced. After this the spasm yielded, and a little milk was swallowed from a teaspoon several times, when suddenly a puff of wind from a rising storm came in at the window upon the little patient, and he went off into another spasm. Three powders, each containing res. scammonii gr. $\frac{1}{8}$, and hydrarg. chl. mit. gr. $\frac{1}{4}$, with sugar, were ordered,

one to be given every two hours, and potass. brom. gr. ii, in solution, were directed to be given every alternate two hours.

The next morning, at nine o'clock, I found the patient had been convulsed part of the night, had not slept, but had taken medicines, and some milk from the spoon. He could not close his mouth upon the nipple, and the attempt intensified the trismus. Bowels had moved freely. The facial expression and spasmodic condition were the same. Cheeks were cool and cyanosed, the cerulean hue somewhat mixed with erythema of the skin extended over the trunk. Sudaminæ over the neck and breast. Umbilicus felt and looked cooler and better. Respiration was 90 and the pulse 150 per minute. Ordered ext. physostigmæ, gr. $\frac{1}{16}$, sod. sulphit. and quin. sulph. ãã gr. i, in solution, to be given every two hours; ungt. belladonnæ to be applied to the spine, and the nourishment with brandy to be pressed. The third day friends reported that the patient had been very bad all the day before, but had passed a quieter night, and taken medicine and food as directed. General appearance was much the same. The intervals between the spasms were more frequent and more prolonged. The cyanosis was more marked over the extremities, and the cries were more feeble. Respiration was 106 and pulse 180 per minute. Hernia was still reduced, and doing well. When the child was put to the breast, spasm came on, but milk given in the spoon was sometimes swallowed, sometimes rejected. The tetanic symptoms were better, but patient was becoming weaker. During the spasms a white fluid (milk) was regurgitated from the stomach freely, so that what was gained between spasms was lost during their continuance. Treatment was continued, but the physostigma was increased to gr. $\frac{1}{24}$ every two hours.

The fourth day I found the child in convulsions, which had been very bad since the previous evening, so that no nourishment or medicine could be taken. Fæces and urine had been voided during the night. Face looked old, wrinkled, and blue. The surface of the body everywhere was sodden and dark from venous congestion. The jactitations of the muscles kept fists moving comically. Limbs resisted forcible attempts to change their positions. Arms drawn outwards a little, sprang together again when released. Umbilicus looked almost well, but I squeezed out a drop of pus from below the cicatrix. Oral aperture was filled by saliva and the point of the tongue. Eyelids were closed, but pupils dilated. Respiration was 130 and pulse 200 per minute; the latter determined imperfectly by ear over the heart. Continuous convulsions existed till 5 P.M., when the child died. Parents would not permit a post-mortem. These cases being so rare, I took my notes by the bedside, that the data might be reliable. I desire attention to the following summary. The bad hygienic conditions surrounding the case, the fright of the mother at the fifth month, and the pathological condition of the cord, may all be regarded as causes; the first two predisposing, the last one exciting. The attack came on between the third and tenth days, which is the rule.

The convulsions affected the whole of the muscles at once. There was little opisthotonos, because the ante-partum flexion had not yet been counter-balanced. There was eagerness but inability to take the breast, except during the relaxations or intervals; and even then the act seemed to excite spasm quicker than any other. Food and medicine were given and retained during the earlier intervals, but regurgitated during spasms later. Pulse was accelerated when first seen, and increased much as the disease progressed; contrary to the statements of authorities, "that it is diminished." The bones of the head were not displaced, and no diarrhœa occurred. The whole duration of the disease was eighty-nine hours. When the hernia protruded, convulsions came on immediately; when the tumor was reduced, they temporarily ceased: this, in connection with the inflammation of umbilical vessels and the drop of pus, excludes pyæmic and centric causes, and brings out clearly peripheric irritation as the principal factor. It will be noticed that my therapeutics were directed to all three. My next case I shall treat in the main locally.

3729 LOCUST STREET, WEST PHILADA.

REPORT OF AN OPERATION FOR LACERATED PERINEUM—UNION FOLLOWING FAILURE OF THE ANAL SUTURE.

BY J. J. MAGUIGAN, M.D.

MRS. McF., a healthy young woman, 23 years of age, was confined in a small village in the State of Michigan, at full term. The presentation was cephalic, occiput front. During the long, difficult parturition the perineum gave way with a violent pain which expelled the head, the rent extending through the sphincters into the rectum. The child was dead.

The accident entailed incontinence of flatus and fæces. With this disgusting infirmity upon her she again became pregnant. In due time I delivered her in this city, without accident, of a healthy male child.

Six weeks after the parturition, I undertook the operation, in which I was kindly assisted by Drs. Wilson, Buckley, and James A. Maguigan. Her bowels were unloaded the preceding day with a dose of castor-oil, after which a two-grain pill of opium was given. Being thoroughly etherized, she was placed in the usual lithotomy position. The operation was rendered extremely difficult by the absence of one of the attendants expected, and was fitfully and hurriedly performed. The vaginal surface of the septum was freely denuded of its mucous covering for an inch of its extent. The lacerated surfaces were next pared off, the incision commencing below and taking off a thin border from the labium. In breadth it extended to the vaginal mucous membrane. Three sutures of silver wire were employed. The needle, armed with the first suture, was made to enter three-fourths of an inch from the margin of the wound just below its lowest point, and, traversing its entire depth, was brought out on the middle of the septum, just above the line of denudation. The needle, being now disarmed, was withdrawn and made to enter on the opposite side at a corresponding point and to emerge on the septum close to the first. Now, the evident design of this thread is to draw tightly together the vaginal septum and the oval extremity of the wound and hold them in this close contact until the resulting

inflammation unites the parts in one and restores the integrity of the sphincter ani. This is its grand aim and function. Great importance is consequently attached to the proper disposition of this suture. But the authority which teaches that the fate of the operation hangs on this stitch, that if union be primarily defeated here, though the rest of the wound have united throughout, the operation cannot be viewed in any light other than that of an absolute failure, is an error. The truth of this proposition, which is not unfairly stated, will be exemplified in the sequel. The two other sutures were placed equidistant, the last near the top of the wound. The parts were closely approximated, and the opposite ends of the wire were brought together and secured by compressed shot. Interrupted sutures were superficially deposited between them. The operation was now finished. The external aspect was handsome. I explored the interior, and, to my chagrin, found a communication between the anus and the vagina. Across the chasm, stretched hard like the string of a bow, the wire could be distinctly felt. I saw that in my haste I had on one side (the left half) passed the wire directly across the vaginal face of the septum, instead of behind it as I was pleased to declare in a foregoing sentence. I feared for the success of the operation, but was not inclined to open up the wound again. I satisfied myself with the hope that the opening would close up by granulation during the progress of the inflammation.

I attended to the after-treatment myself, with the most scrupulous exactness in its many details. I drew off her urine with a catheter twice daily for the first few days; after this she relieved herself by turning forward on her side. I syringed the parts daily with a detergent composed of carbolic acid and water. Her bowels were kept quiet with opium. Nutritious food—beef-tea, eggs, and milk, articles which leave little residuary matter to fill up the bowels—was freely administered. Her knees were confined with a bandage. I had the good will and co-operation of the patient, and the support and encouragement of her sensible mother. Everything indeed seemed to work in the most harmonious accord, with a hopeful promise.

On the sixth day, finding that the sutures had outlived their usefulness, I removed the two anterior ones and found that the union was here complete. I let the posterior stitch remain until the following day, but as it was then clearly of no further service I removed it. The wound gaped at the anal aperture, and revealed a channel of communication between the anus and the vagina large enough to admit the point of the finger. Here there was certainly a failure of the first stitch, and consequently of the operation. I hesitated to communicate the mortifying intelligence to my patient. I stated my case to Philadelphia's great perineal surgeon. He gave me little hope. I requested him to examine the case before passing judgment. This he kindly consented to do. After exploring the parts, he declared in the most positive manner that the result was destitute of any value, and that the whole perineum would have to be opened up again, and advised a new operation. With this crust of comfort he left me. Now, to my mind (as well as to my eye) it seemed clear that the operation which I had done had resolved a bad case of perineal laceration into one of simple anal fistula with division of the sphincter ani. I recognized the case only in its new relations, and treated it as the primary and essential lesion. I touched the fistulous track with a crayon of nitrate of silver. I returned in a week, and found, to my delight, that the track was nearly closed. One more touch with the *lapis mirabilis*, and the parts came nicely together and cicatrized. The patient's recovery was simultaneously proclaimed.

1241 NORTH SEVENTEENTH STREET.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF R. J. LEVIS, M.D.

Reported by Dr. JOHN B. ROBERTS.

TETANUS RESULTING FROM GUNSHOT WOUND OF THE ARM TREATED BY HYDRATE OF CHLORAL.—CONVALESCENCE OF THE PATIENT.

WILLIAM T., aged 19, while gunning, was shot in the left arm by his own fowling-piece, the contents of the barrel tearing away the inner side of the arm and fore-arm for about six inches, and burying themselves in the tissues of the arm.

Upon admission, there was a good deal of hemorrhage from the wound, but the ulnar and radial arteries beating naturally at the wrist showed that the shot had not cut into the brachial artery. The wound was dressed with solution of carbolic acid and oil; but in a few days it assumed an erysipelatous condition, and the arm became much swollen and gave the boy severe pain. The treatment was continued, with the addition, however, of lead-water and laudanum locally, and iron and quinine internally.

Under this treatment the wound gradually assumed a more healthy appearance, large quantities of shot and wadding were discharged from its upper angle, the patient felt comfortable, and all things progressed favorably. On the fourteenth day, however, there came a change, and at the morning visit there was noticed a slight stiffness of the jaws, and some rigidity of the recti abdominis muscles, showing conclusively the advent of tetanus. The patient had great difficulty in eating, and, when asked to open his mouth, could scarcely separate his jaws, so that he could only receive liquid nourishment.

In a day or two these symptoms increased, so that the boy complained of pain in the posterior cervical region and along the spine, and of having bitten his tongue several times by the spasmodic snapping together of his teeth.

At the first intimation of tetanus the treatment adopted was ten grains of hydrate of chloral every two hours, with occasional doses of morphia when the pain was very severe. The object was to get the patient thoroughly under the influence of the chloral, and to keep him sleeping the greater part of the time. Accordingly, the frequency of administration of the drug was varied as circumstances indicated; sometimes the dose raised, at others the ten grains given every hour or hour and a half, while occasionally the interval was increased to three hours; the boy receiving, on an average, about one hundred grains during the twenty-four hours.

Under this treatment the patient was quite comfortable, and slept much, but there was no relaxation of the tonic spasm, and the muscular rigidity gradually increased.

Four days after tetanic symptoms first presented themselves, Dr. Levis, although the great gaping wound looked healthy, opened up the parts, in order to ascertain whether any wadding or shot yet remained imbedded in the tissues, and tore open the inter-muscular spaces with the finger, lest there should be irritating pressure exerted upon some of the nervous trunks of the arm. No foreign material was found, and, after the tension had been thus relieved, the limb was enveloped in a large poultice.

The symptoms continuing, it was thought that amputation might possibly afford a chance of relief, but, after consultation, it was decided that the removal of the limb at this period, after the nervous centres had been so certainly involved, was a step of too doubtful pro-

priety. Accordingly, the chloral-treatment was steadily persisted in, notwithstanding that diarrhœa occurred on the sixth day, whether or not produced by the drug it is difficult to determine. This looseness of the bowels was controlled by camphorated tincture of opium.

The trismus continued about the same, the dorsal muscles became more and more contracted until opisthotonos was very marked, and the patient became unable to empty his bladder. During this time, however, there were no spasms and no difficulty in deglutition, for the food readily passed into the stomach after it was placed in the mouth.

Traumatic tetanus seems to occur more frequently in young than in elderly subjects, and may follow the receipt of various injuries, often occurring after the most trivial. Dr. Levis has had the disease supervene after frost-bite, and even in a case where issues were made by Vienna paste for the cure of varicose veins.

In this case the tetanic symptoms first noticed in the masseter and temporal muscles did not present themselves until the fourteenth day after the receipt of the injury, though the affection often shows itself much earlier.

The face of the patient has an anxious expression, is moistened with perspiration, and the skin of the forehead is traversed by wrinkles; these signs constituting the characteristic physiognomy of tetanus. The muscles of the jaw are generally involved first,—whence the name of locked-jaw,—and then the posterior cervical muscles; afterwards the abdominal and dorsal, and finally those of the extremities, show rigidity; whereas the hands, and particularly the feet, seem to escape the tonic spasm.

In this case, owing to the chloral administered, the pain and stiffness increased gradually, without any positive tetanic spasms; although occasionally there were slight paroxysms in which he bit his tongue. For this reason he held between his teeth a piece of leather, to prevent injury to his tongue during the spasmodic snapping of his jaws. It is worthy of remembrance that it may be a dangerous experiment to ask a man with tetanus to protrude his tongue for inspection. A case recently occurred in the hospital in which the jaws shut down upon the tongue as it was thrust forward, and were separated only with great difficulty and after severe laceration of the member.

The prognosis of this, as of every case, was, of course, unfavorable, but when the patient had survived for two weeks since the advent of tetanus, it was thought that he might perhaps recover; for it has been frequently observed that the mortality is much less in those who have been kept alive until after the tenth day.

The treatment of this nervous affection is exceedingly unsatisfactory, and almost every remedy of the *materia medica* has been employed. Opium has long been considered the most efficacious; but so long as nearly every case of traumatic tetanus proves fatal, the search for some more potent remedy must be continued. Dr. Levis has seen three cases recover under the use of large doses of chloral, one under physostigma, and one under bromide of potassium in combination with chloral.

The chloral-treatment has been lauded so highly of late that it was thought well to test it in this case. Death occurs usually from asphyxia caused by laryngeal spasm, and it is probable that the chloral does nothing more than prevent the occurrence of spasms, and thus lessen the chances of suffocation.

At this time—five weeks since the trismus was first observed—the patient is convalescing, and, unless something unforeseen occurs, will steadily improve. There is little or no pain in the dorsal muscles, the opisthotonos is lessened, and he is able to separate his jaws wide enough to allow a thumb to be passed be-

tween the teeth; while the wound in the arm has filled up with granulations, is without pain, and rapidly cicatrizing.

Dec. 10.—The patient is now well.

ALLGEMEINES KRANKENHAUS, VIENNA.

CLINIC OF PROF. CARL BRAUN, OCTOBER 28, 1874.

GENTLEMEN,—We bring before you to-day a woman 35 years of age, who since yesterday has been in labor. Physical examination shows a pulse of 60, regular and strong; skin moist and cool, and the temperature of the body normal. On inspection, we find an abdomen much more than usually large; while a large tumor is found in the left inguinal region. The fundus uteri is strongly inclined to the right, and palpation reveals the uterus in a state of tonic contraction. What is here the cause of difficulty? Why does not the head pass into the pelvis and labor come to a natural and easy termination? A vaginal examination shows the pelvis rather more than usually small; but in every portion it is perfectly regular, and can by no means be termed a *contracted* or *narrow* pelvis. The cervix is very much elongated, and with two fingers introduced I am unable to reach the internal os. Meconium is present, a sign which we are often led to associate with difficulty or danger; and it is evident that the child is making fruitless attempts at respiration. On measuring the length of the child, which we can readily do by placing one hand over the fundus and the other over the head, upon the surface of the abdomen, or by its introduction into the vagina, making in all cases allowance for the intervening tissues, we find it to be about eighteen inches. Having ascertained its length, we can then estimate its weight; for the length of the child in utero and its weight, *as a rule*, bear to each other a definite relative proportion. The length of the child may be ascertained in the manner already mentioned as early as the fifth month. From this until the tenth month the child attains an increase in length of two inches for every month, and, if we reckon according to Austrian pounds, an increase of one pound for each month, so that we have such a table:

5th lunar month	=	10''	=	1 pound.
6th " "	=	12''	=	2 pounds.
7th " "	=	14''	=	3 " "
8th " "	=	16''	=	4 " "
9th " "	=	18''	=	5 " "
10th " "	=	20''	=	6 " "

An examination of the head, which we find to be the cause of the large prominent tumor in the left inguinal region, shows it to be very large, measuring certainly four or five inches in diameter. A vaginal examination also reveals the presence of very wide sutures, the sagittal suture measuring fully an inch in width. Here, then, we find the cause of this delayed labor, viz., hydrocephalus.

What, then, shall be our treatment, and what is our prognosis? Of one thing we are certain: this child cannot be born without the assistance of art, and hence we must make an attempt to help. Delay can bring no release to the mother, whose forces are gradually diminished as the period of delay is lengthened. If left alone, the case will terminate in one of two ways: either in metritis with fatal termination, or in rupture of the uterus; and the latter is most frequent when nature is unassisted. Shall we wait for the expansion of the os? No. As already said, the cervix is several inches in length; the internal os being situated opposite a point four inches above the mons; while the head stands on the brim of the pelvis, unable to enter. Turning is not practicable. The application of the forceps can

avail nothing; such an attempt would result in complete failure, and you would withdraw your instrument empty.

The treatment applicable in such cases, and which we will here make use of, is as follows: Introduce the left hand, grasp the head so as to hold it firmly in position, and then, passing a trocar along the palmar surface of the hand and fingers, so as to avoid injuring the tissues of the mother, introduce it into the cranial membranes, and withdraw the fluid. I prefer here a long and curved instrument, which will adapt itself to the curve of the pelvis. I would not, in such cases, perform craniotomy; not, however, because I think, as some assert, that any other course of procedure might lead to the birth of a child having the capability of living any considerable time. When not certain of the existence of hydrocephalus, you can apply the forceps, and make an attempt at extraction. It has also sometimes a good moral effect, while in the eyes of parents and friends it seems less barbarous than opening the cranium; and when you fail, as you must in hydrocephalus, you can proceed to puncture and deliver. The size of the head may be measured by the forceps. Introduce the blades, placing them in position, and measure the distance of the handles apart; then, removing, place them again in the same relative position to each other, and measure the distance between the blades. Applying that instrument, we find a diameter of four and one-half inches for the head. Introducing a trocar, we withdraw the fluid characteristic of hydrocephalus, a thin, transparent, watery liquid, measuring in this instance one and a half pints.

In these cases the great size of the head, still remaining after the withdrawal of the fluid, may offer a serious obstacle to delivery, and resort to the forceps or cranioclast is frequently called for. A resort to the cranioclast is always attended by a very unpleasant sensation to the operator. The movements of the child, indicative of the pain it suffers, can be distinctly felt, and it is no pleasure to know that you are thus destroying the life of a human being.

Since the withdrawal of the fluid, we find the relation of the uterus to the pelvis and the abdomen entirely altered. The head, which before presented such a large tumor in the left inguinal region, has receded; and the fundus, instead of lying so far to the right, has returned to the median line.

We here leave the case for the present to the efforts of nature, which it is hoped will prove all-sufficient for delivery during the lapse of a few hours.

G. WILDS LINN.

TRANSLATIONS.

ON THE SO-CALLED SPONTANEOUS REGENERATION OF NERVES.—Under this title Prof. Vulpian contributes to Brown-Séquard's *Archives*, Nos. 4 and 5, 1874, a communication, in which he modifies certain statements made by himself some years ago, relative to the regeneration of nerves.

Experiments were made in 1859 by Vulpian and Phillipeaux, who removed entirely the central part of certain nerves, so that it seemed impossible that any communication whatever could be established between this portion of the nerve and the peripheral segment.

It was found, however, that after becoming atrophied to a certain degree the peripheral portions of the nerves operated upon became the seat of an active process of regeneration. A large number of nervous fibres reappeared little by little, with all their normal characteristics. In certain nerves, as the hypoglossal, the regeneration at times seemed almost complete.

This took place although the hiatus established by excision between the central and peripheral portion continued complete. The researches of Waller had proved conclusively that every nervous fibre separated from its trophic centre would not only atrophy, but would never become regenerated unless put in connection with such trophic centre by reunion or reproduction.

"Our researches," remarks M. Vulpian, "seemed to prove that the propositions formulated by Waller had been too sweeping, and we concluded that the maintenance of the structure of nerves only depends in part upon the influence of the central nervous system;" "that altered nerves may become regenerated or restored without the intervention of an influence emanating from the nervous centres;" and, finally, "that nerves separated from the nervous centres may, even while they remain isolated from these centres, recover their normal structure and properties." "Although I believe that we took every precaution against error, I cannot go over the various details, but will confine myself to a few words relative to the experimental results which have led me to retract, on my part, to-day, the assertions formerly made by us relative to the autogenetic regeneration of nerves."

M. Vulpian then goes on to speak of certain confirmatory experiments. Having cut out a portion of the hypoglossal nerve of a dog, he found that after some months the motor power was still retained. He then made a deep incision at the initial end of the peripheric portion, sweeping the knife around so as to cut off any accessory filaments. On microscopic examination of this portion a week or so later, he found that, with the exception of a very few fibres, the nerve remained unchanged.

This seemed to prove almost conclusively the fact of autogenetic regeneration, since this regeneration could not be explained as apparent and depending upon anastomotic filaments, for these had been cut.

Further experiments, however, were made, which caused him to arrive at a different conclusion. When the peripheral portion was not only separated, but this process of isolation was carried some distance along its course, it was found that the motor power was almost entirely destroyed, and that under the microscope the nervous filaments were visibly altered. It seemed to result from these experiments that the peripheral portions of the hypoglossal or lingual nerves, after the excision of a part of their length, only became regenerated because certain of the filaments and nervous tubes connected with these peripheral portions, and which had been cut during the operation, became united and reassumed their continuity. Anatomico-physiological relations were thus established between these nerves and the nervous centres by the intermediation of other nerves in the neighborhood.

The number of tubules in the anastomotic branches is always less than the number of tubules in the peripheric portions of the nerve which become regenerated. It is probable that each of the fibres which restore to the peripheral portion of the nerve the trophic influence of the nervous centres may give rise to several new fibres, or transmit this influence to a certain number of old fibres with the result of arousing in them the regenerative evolution.

If the new interpretation which is now proposed for these facts observed in 1859 is correct, it will be seen that the trophic influence of a nervous centre may be furnished to a nerve by another region of the gray substance than that from which that nerve takes its origin.

This proposition has already been proved by experiments made by MM. Vulpian and Phillipeaux on the end-to-end reunion of nerves of different origin.* It

* See Med. Times, April 25, 1874, p. 472.

seemed permissible to conclude from these experiments that the trophic influence of the nervous centres had been transmitted to the peripheric portion of the hypoglossal by the essentially sensitive fibres of the lingual nerve; and, as a consequence, that the region of gray substance where the sensitive fibres, those of the linguals, originate, may serve to maintain its integrity of structure of the fibres of the hypoglossal,—that is to say, of motor fibres.

Certain reservations, however, must be made in drawing conclusions from these facts, since the hypoglossal is far from being a simple nerve, and also because it anastomoses to a certain degree with adjoining nerves. The interpretation of these facts is beyond doubt very difficult.

M. Vulpian concludes: "Recent experiments which I have made in the regeneration of the peripheral portion of the hypoglossal after exsection of the central part of this nerve enable me to assert that this regeneration does not take place in an independent manner and without any influence on the part of the nervous centres. It appears to come about by the mediation of fibres, anastomotic or other, which, in regaining their continuity, place the peripheral portion of the hypoglossal nerve in an anatomico-physiological relation with these centres."

The same explanation would answer quite well for all the other facts of so-called autogenetic regeneration observed after removal of the central portions of the facial or spinal nerves, etc.

Certain nerves, as the sciatic, having few anastomoses, become regenerated but slowly, and at best but to a slight degree; even some months after exsection of a portion of the sciatic in a rabbit, only a small number of regenerated nerve-tubules were found in the peripheral portion of this nerve.

The laws of Waller, therefore, reassume their entire and absolute value; and in nerves, the nervous fibres provided with myelin do not preserve or recuperate the integrity of their structure during extra-uterine life, and above all in adult animals, but on the condition of being in relation, the one (sensitive fibres) with the ganglions of the posterior root, the other (motor fibres) with the gray substance of the cerebro-spinal axis.

A. V. H.

PREVENTIVE AND EXPLORATORY TREPPANNING IN FRACTURES OF THE INTERNAL OR VITREOUS TABLE OF THE CRANIUM.—M. Sédillot read a note on this subject before the Académie des Sciences at a recent meeting. His conclusions were as follows:

1. Preventive trepanning is the surest method of treating all fractures of the internal table of the cranium complicated by splinters.

2. The operation is demanded in cases of external stellate or linear fracture with depression of the cranium.

3. Hesitation is permissible in simple linear solutions of continuity without displacement of the bones.

4. The means of diagnosis comprise the causes of the traumatism, symptoms, auscultation, percussion, thermometry, and of explorative trepanning.

5. The absence of any exterior fracture does not contra-indicate the possibility of an internal one, following direct traumatisms of a circumscribed or violent nature; and if auscultation and percussion, the force of the blow, the nature of the wounding body (gunshot wounds) do not indicate the necessity of exploratory trepanning to the surgeon, it is his duty to watch the patient carefully, and to have recourse to this operation without delay, where new symptoms indicate the opportunity. This is understood to be in localities exempt from infectious influences which experience shows to be constantly fatal in similar cases.

6. Precautions and dressings founded upon the theory of ferments will modify, perhaps, this inability to operate, and seem already to promise most favorable results in wounds of the cranium.—*Gaz. Méd. de Paris*, Oct. 24, 1874.

A. V. H.

CHLORAL AS AN APPLICATION IN GANGRENE.—M. Dujardin-Beaumetz communicated to the Société des Hôpitaux, at a recent sitting, an account of the case of a young man 18 years of age, who applied for relief for spontaneous gangrene affecting the hand and fore-arm. In order to dissipate the odor and to avoid the danger of septicæmia as far as possible, M. Beaumetz had the affected limb kept constantly in a bath containing one part chloral to five hundred parts water. At the end of eight days the arm was amputated, with a favorable result.

A. V. H.

CONGENITAL ABSENCE OF THE BLADDER—INCONTINENCE OF URINE—CATHETERIZATION—DEATH FROM PERITONITIS.—At a recent meeting of the Société de Chirurgie, M. Gyon read for M. Fleury the following observation:

A young girl who had menstruated since about a year previously, entered the hospital at Clermont for incontinence of urine of some months' duration. The vulva and the upper portion of the thighs were the seat of a painful erythema. A sound introduced into the canal of the urethra did not penetrate more than about an inch and a quarter. The vaginal touch showed relaxation of the vulvar ring, but furnished no further information.

Her general condition was good. Examination with the speculum was postponed until the following day. At that time the patient complained of pain in the belly; the skin was hot, the pulse frequent. The catheterization had been carefully made, and these symptoms could not be accounted for. They increased in severity, and the patient succumbed a few days later.

The autopsy revealed an effusion of pus into the abdominal cavity, covering the folds of the intestines. The bladder was entirely absent, the ureters terminating on the sides of the urethral cul-de-sac. The left kidney contained creamy matter of a whitish-yellow color; the right kidney was healthy. It was difficult to explain how, with such a vice of constitution, the incontinence dated back only one year; later, however, M. Fleury learned from the patient's mother that this infirmity was congenital, but that it had become insupportable only within the last year. It is possible that within this time the urine had acquired an acidity which brought on the erythema.—*Bull. Gén. de Thérap.*, Nov. 15, 1874.

A. V. H.

HYDATID CYST OF THE LIVER RELIEVED BY ASPIRATORY PUNCTURE.—At a recent meeting of the Société des Hôpitaux, M. Dumontpallier communicated the following case:

A patient, after having presented for some time the various symptoms of dyspepsia, showed signs of a chronic pleuritic effusion on the right side. A series of blisters were applied, and aspiratory puncture was proposed,—the diagnosis of hydatid cyst of the liver having been arrived at. The proposal of this treatment was negatived at the time by the patient and the consulting physicians. Some time afterwards the dyspnoea became very distressing; puncture was again proposed, and was practised with a No. 2 Potain's trocar, about half an inch below the nipple. The exit of a transparent, non-albuminous liquid, containing the débris of hydatid sacs, was the result. The operation was followed by immediate relief, and resulted in complete cure.—*Bull. Gén. de Thérap.*, Nov. 15, 1874.

A. V. H.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

THE RIGHT MAN IN THE RIGHT PLACE.

THE pressure of original matter upon the columns of the *Times* is at present so great that we must defer considering the causes of the slow growth of specialism in this city; but we desire briefly to call attention to the recent appointment of coroner's physician, as an instance of a tendency to the belief that the less education upon a special subject a physician has, the more fit is he for a position involving special knowledge of that subject; or else of an almost equally indefensible tendency to select men not because they have special fitness, but because they are friends of the appointing power, or have some coveted influence.

Dr. Goddard, our new coroner, was elected largely through the efforts of the profession, because a medical coroner was wanted, and because it was believed that he would appoint such physician or physicians as, having a knowledge of medical jurisprudence, would gather important gleanings from their experience to add lustre to the medical fame of our city. We have a few men of ability who have devoted a great deal of attention to the subject of medical jurisprudence; but, instead of selecting them, Dr. Goddard has appointed two of our busiest and most popular surgeons,—men of the highest eminence in surgery, but destitute of any special training in, or knowledge of, medical jurisprudence,—men, too, so absolutely engrossed in public and private practice that it is absurd to sup-

pose they can study up the subject, or even attend to the mere routine duties of the position; of course the work will be done by deputies.

Dr. Goddard, knowing that his appointees are deservedly esteemed as surgeons, may have chosen them because he thought that they could influence the profession in his favor; but we think the Philadelphia profession will never stultify itself by endorsing such an appointment. If Dr. Goddard had selected Prof. Reese, or some other equally well-known special student of medical jurisprudence, he would have greatly strengthened himself; as it is, when, in the future, he wants most the sympathy and aid of his brethren, he will perhaps discover his mistake.

LEADING ARTICLES.

THE TRANSMISSIBILITY OF TUBERCULOSIS.

II.

IN our last article it was shown that tuberculosis may be communicated by inoculation. A still stronger corroborative proof that it is a virulent infectious malady is furnished by those investigations which have been made to demonstrate its wellnigh infallible communicability through the digestive canal.

It has now been settled beyond all controversy that the contagia of certain virulent diseases, when administered, can infect as readily through the digestive organs as through any other channel. This is especially true of variola crusts and pustules, and of the discharges from glanders and anthrax.

Chauveau, of the Lyons Veterinary School, with a view to ascertain whether phthisis was also transmissible in this manner, instituted a series of experiments by administering large quantities of tuberculous material. Deeming it essential that a species of animals should be procured in which tuberculosis was a spontaneous disease, endowed with the characters it presents in man, he therefore selected the bovine species, and, as a precaution to avoid experimenting upon animals already infected, he resorted to calves born and bred beyond all those influences or conditions which favor the natural development of phthisis.

Four calves were selected. One, which was kept for comparison, remained unaffected; the three others, fed upon tubercular matter, were in such a miserable state fifty-two days from the commencement of the experiment that it was considered time to kill them. The autopsies revealed the most perfect lesion of generalized tuberculosis, the mesentery and intestines being extremely involved. Peyer's glands were nearly all in a state of ulceration; besides, there was an eruption of tubercles throughout from the duodenum to near the termination of the colon. The lesions in the thorax were less marked than those of the abdomen; all the

bronchial and mediastinal glands were enlarged and diseased. Throughout, there was a marked predominance of the glandular over other forms of tuberculosis. To show that there was no analogy between this induced disease and purulent infection, Chauveau states that he has introduced with impunity large quantities of pus into the digestive canal. He concludes his important communication with this résumé of his experiments: 1. They prove that bovine animals contract tuberculosis by digestive ingestion, as they may take anthrax and vaccinia. 2. They place beyond doubt the fact as to the virulence and contagious property of tuberculosis, and show that the labors of Villemin have not been recognized as they deserve. 3. They show that the digestive canal constitutes in the bovine species, as in man, a channel of contagion readily disposed for the propagation of tuberculosis, and which may be more frequently the mode of access than through the pulmonary organs.

Gerlach, Böllinger, Zürn, Leisering, Harms and Gunther, Klebs, Bagge, Saint-Cyr, Pétróff, Vergad, besides other experimenters, have all succeeded in producing artificial tuberculosis by feeding tuberculous flesh and lungs, caseous lymphatic glands, etc., taken not only from phthisical men, but also from cattle and pigs spontaneously or artificially affected with the malady. The different varieties of animals chosen for these experiments were nearly as numerous as the varied investigators, so that now, besides rabbits and guinea-pigs, sheep, pigs, dogs, cats, and cattle may safely be said to be susceptible of acquiring tuberculosis by ingestion in the digestive canal. This long list of carefully-conducted experiments certainly justifies the conclusions as to the virulency of this affection, and must appear convincing to any but the most skeptical.

Of these investigations, those which were made with the cooked and uncooked flesh and milk of phthisical cattle are by far the most interesting and important in their practical bearings.

Böllinger, Gerlach, and Klebs, especially, have been successful in producing tuberculosis by giving animals milk from phthisical cows. In addition to rabbits and guinea-pigs,—creatures apparently very susceptible to the artificial production of the disease,—Klebs* accidentally induced the disease in a dog by feeding it with the milk of a cow in the last stages of phthisis. The use of this milk seems always to produce tuberculosis, which commences as an intestinal catarrh, and then gives rise to mesenteric glandular tubercles; later it affects the liver and spleen, and finally the thoracic organs. He thinks it probable that the virus of tuberculosis may exist in varying proportions in the milk of phthisical cows according to the extent of the disease in them; and he further believes that the malady may be developed in children born without any tendency to it, through the medium of the milk of the mother or nurse.

Böllinger thinks it probable that intestinal tubercu-

losis, consecutive to pulmonary phthisis, may be produced by the sputa being swallowed and passing into the intestine.

The present status of the transmissibility of tuberculosis is admirably summarized in Gerlach's statement of the results of his experiments. 1. The tuberculosis of cattle is very infectious. 2. The tubercles covering the serous membranes, as well as those in the other organs, are as infective, and produce the same tubercles, as the tuberculous matter of the lungs. The identity of pulmonary phthisis of cattle and general tuberculosis cannot be doubted. 3. Infection can be produced after inoculation as well as after ingestion of the tuberculous matter. 4. The *flesh* of animals affected with tuberculosis possesses, in certain conditions, the power of infecting; though to a less degree than tuberculous matter. 5. The temperature of boiling water destroys the infective principle, though boiled tubercles, nevertheless, often preserve a certain degree of virulence. It is in this as in trichinosis. 6. The infective properties of uncooked phthisical milk can no longer be doubted or denied.

Thorough cooking of the milk and flesh, it is true, may completely destroy their virulent properties; and even though flesh in itself is hardly to be regarded as contaminating unless it contains infiltrated lymphatic glands, yet, as we all know that tuberculized viscera, when they are not much affected, are not rejected as food, we must, in the light of all these experiments, regard these articles as playing an important part in the propagation of tuberculosis in the human species. To enumerate here the prophylactics against such possible sources of contamination would be superfluous; but does it not behoove our sanitarians and legislators to adopt the necessary preventive measures?

Another form in which infectious phthisical matter may enter the economy through the digestive system is that of the sputa, either in the moist or dried condition. Veterinarians have long believed and admitted this source of infection among cattle. That the dried mucosities and secretions are capable of transmitting the disease among animals scarcely needs any further proof than the evidence already furnished. Upon this point the observations of M. Grad are very conclusive. When visiting the stables of an extensive farmer at Leinheim, he was informed that every year for five years one of the cattle had died from phthisis; "and, what is very curious," said the farmer, "this always happens in the same stall." Believing that an hereditary tendency was doubtless the efficient cause in this succession of losses, another perfectly healthy animal was placed in the same stall, which in time presented all the evidences of the disease. The conclusion being now made that, in all probability, the disease had been transmitted by the ingestion of the matters expectorated by the animals which had previously inhabited the same place, all the wood-work of the stall, manger, and rack was removed, and the place thoroughly disinfected. It is significant that, although the stall was rebuilt and successively occupied, tuberculosis made no more victims in it.

* Klebs, "Ueber die Entstehung der Tuberculose und ihre Verbreitung in Körper," Virchow's Archiv, Bd. xliv. S. 242.

So great is the danger of transmission of tuberculosis among cattle that it is considered advisable to isolate completely those that are diseased from the healthy animals. For ourselves, we do not understand how, in the face of all these facts, it can any longer be said that the human species are exempt from these same dangers of infection.

R. M. B.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

NEW YORK, November 25, 1874.

THE meeting of the Medical Society of the County of New York last evening was one of unusual interest. The retiring President, Dr. Elsworth Eliot, gave a brief valedictory address, in which he alluded to the history and progress of the Society during the past year, referred in an appropriate manner to those who had been retired from the ranks of membership by death, and gave a stinging rebuke to that class of regular physicians who make known their business and qualifications to the people at large by means of advertisements in the newspapers,—one of whom had been ignominiously and promptly expelled during the year. He also referred to the fact that while certain medical societies in the city—he mentioned the Medical and Journal Association—were in the habit of inviting members of the daily press to be present, so that reports of their proceedings were frequently found in the newspapers the next morning, this practice did not hold good in regard to this Society.

He touched upon the question of the medical law of this State, as passed by the Legislature at its last session, which compels every medical graduate in this city to register, and every man or woman practising medicine in this city who does not hold a diploma, to pass an examination before a properly appointed examining board.

While the law does not cover the ground so fully as it is wished, yet, if the community by its enforcement are the gainers, it will not have been passed in vain. The censors have exercised the utmost vigilance; and they are not disposed to let down the bars so that designing men can claim equality in rank with the regularly qualified physician. He adverted to the action of the Board of Public Charities and Corrections, and thought that the rule granting equal clinical advantages in hospitals to the several medical schools would work to the advantage of medical education and the community at large. Dr. Eliot did not favor the practice of giving to specialists a particular designation,—as, for instance, to him who practises exclusively upon the eye, the name oculist. He preferred and recommended the manner of designation as follows: "Geo. Blank, M.D.; special attention given to Diseases of the Ear," etc.

The term "Doctor," in medicine, should apply to all graduates. The variation should consist in something after the above form.

Dr. Eliot then retired from the chair, and Dr. Sands, the President-elect, assumed control as presiding officer for the ensuing year; and, in doing so, he called attention to an invitation to the members of this Society to meet the Academy of Medicine to consider the subject of the erection of a building to be devoted especially to the meetings of the societies of the city,—or, in other words, the founding of a home for the profession in this city.

Prof. Sands then proceeded to deliver his inaugural address, the principal object of which was the consideration of Esmarch's method of bloodless operation, and the results of the same as regards the city of New York and vicinity during the last year.

He first considered briefly the history of the operation; secondly, its advantages and disadvantages; and thirdly, an estimate of the value of the operation according to the experience of our own surgeons. He also described the method of the application of the bandage. He prefers an elastic bandage to the cord, because the latter will be apt to injure the vessels and nerves, while the former, on account of the surface over which the pressure is extended, is less liable to this result.

As regards the operation in this city, Prof. Sands presented a table of cases collected from the principal hospitals of New York, Brooklyn, and Jersey City, and from the private practice of Drs. Wood, Krackowizer, Gouley, Ely, Weber, Little, and himself. The records of the Charity Hospital are not included, as they were so imperfectly kept that no use could be made of them. He also failed to obtain the experience of St. Francis's Hospital, in this city, where more than twenty bloodless operations are said to have been performed. He had endeavored to procure all of the hospital cases, both good and bad; and, although some of the histories are imperfect, they present many interesting and instructive details. The list embraces one hundred and forty-three cases, including 63 amputations, excluding those of the fingers and toes. Of these operations 44 were primary, for injuries, and 19 secondary, or for disease. Of the primary amputations 10 cases, or 22.7 per cent., terminated fatally, the causes of death being as follows: pyæmia, 4; exhaustion or shock, 3; spreading gangrene, 1; hemorrhage, 1; erysipelas, 1. Of the cases fatal from pyæmia, one patient had the disease at the time of the operation. Of 8 cases of primary amputation of the thigh, 2, or 25 per cent., ended fatally. Of 11 cases of primary amputation of the leg, 3 cases, or 27.3 per cent., were fatal.

Secondary amputations—19 cases—give us a mortality of 21 per cent. The causes of death are stated as follows: tetanus (existing at time of operation), 1; exhaustion, 1; phthisis, 1; pyæmia, 1: total, 4.

Although he had not the means of making an exact comparison, he believed that the percentage of recoveries in these primary amputations—which were nearly all performed upon hospital patients—is somewhat larger than is commonly observed in such operations.

Of sixteen cases of excision of the joints, only one

proved fatal, the cause of death being pyæmia; another case will probably end fatally, however, as when last heard from the patient was reported to have tetanus. Finally, the list includes two more deaths: one following an operation for necrosis,—the only fatal case out of 36,—and the other an operation for ligation of the ulnar artery, performed for a wound near the wrist.

Upon the whole, the method is one concerning which he spoke in the highest terms. It is one of the most valuable surgical expedients of modern times, and needs only proper knowledge and skill in its application.

Prof. James R. Wood, M.D., remarked that he had operated twenty-five times, each time employing this method, without bad results, with the exception of one case, mentioned in the table of Dr. Sands. He has repeatedly operated, both in hospital and private practice, in young and old, men and women, and has had no trouble whatever, and he has "fallen in love with the operation." The surgeon who formerly performed his operations by groping in the darkness can now witness each step of the operation with the eye. "Is there not," said he, "something beautiful in this,—something worthy the attention of surgeons?" He was not in favor of the cord, but of the bandage.

Prof. Frank H. Hamilton has made eight operations employing the bloodless method,—four amputations and four exsections,—and he is highly pleased with the success attained. He has had no accident that he can possibly attribute to Esmarch's method. He did not look upon the cord with favor. He preferred a bandage.

Prof. Markoe was satisfied with the efficacy of the method in preventing hemorrhage. He has had no accidents from this cause. He mentioned a case where the cord had been used. There was no sloughing at the time, but five or six weeks after the operation, just at the point where the cord had made pressure, a sloughing occurred down or nearly down to the bone. The case, however, recovered. With this single exception, he had experienced no bad results.

Dr. Krackowizer, who was the first to employ this method in this city, on the 22d of October, 1873, is still in favor of it. Instead of the rope or elastic webbing or bandage, which is objectionable on account of the possibility of its accumulating filth, and because of the inability of the surgeon always to secure the most approved articles, he thought it well to extemporize a bandage whenever practicable. He had from the first objected to the cord, and was in the habit of splitting a common india-rubber hose, an inch or so in diameter. This served the principle and the purpose.

Dr. Watson spoke of a case occurring in the town of Niagara, N.Y. The wrist was crushed. Operation was performed at the lower third of the fore-arm, by Esmarch's method. On the second day after the operation, the tissues became somewhat discolored. On the fourth day the limb in the neighborhood of the stump became gangrenous. The unfavorable character of the case rendered a second operation necessary. He has not heard further from the case.

Dr. Parker had not had any personal experience in

the matter, but suggested in a general way various untoward results which might possibly happen.

To sum up, the sentiment of the meeting appeared to be largely in favor of this method. It was looked upon as second in importance, as relates to the whole field of surgery, to the discovery of anæsthesia; and, like the subject of anæsthetics, it requires close and extended study to bring it to a state of perfection. W.

REVIEWS AND BOOK NOTICES.

THERAPEUTICS AND MATERIA MEDICA. By ALFRED STILLÉ, M.D. Fourth Edition, thoroughly Revised and Enlarged. H. C. Lea, Philadelphia, 1874.

The magnificent work of Prof. Stillé is known wherever the English language is read and the art of medicine cultivated,—known so well that no encomiums of ours could brighten its fame, and no unfavorable criticism could tarnish its reputation. Its peculiar merits and its peculiar faults—the individuality of the book, so to speak—have long since been generally recognized, so that it is our only duty to announce the appearance of this new edition, and to assure our readers that it is, as it were, an exaggeration, or an intensification—pardon the word—and amplification of the familiar volumes. So much more has been gathered into this vast storehouse of the universal clinical observation that the reader will be more embarrassed than ever by the very mass of matter. Two hundred and fifty new pages indicate the amount of this addition.

We are very far from desiring to criticise the volumes before us. As an American we are proud of them, and as a Philadelphian we are doubly so, but we cannot refrain from making a few remarks upon a paragraph in their preface.

Dr. Stillé says that in the first edition of the work he contended against "the mischievous error of seeking to deduce the therapeutical use of medicines from their physiological action. Continued study, observation, and reflection have tended to strengthen his convictions upon this subject, and to confirm him in the faith that clinical experience is the only true and safe test of the virtues of medicines." We are not exactly sure of the meaning which Dr. Stillé intends to convey by these words. If he means simply that clinical experience guided by a thorough knowledge of the physiological action of remedies and of the pointings of nature in disease is the ultimate test in therapeutics, we know of no one who will disagree with him. But if he means that therapeutics is to be advanced solely or chiefly by what we may be pardoned for calling the blind, unlettered experience of mere clinicians, who are not acquainted with the physiological action of remedies, and even despise such knowledge, we most earnestly dissent. If there be no better method of therapeutic inquiry than that so long employed, the future looks to us almost hopeless, and we welcome the quiet calm of that therapeutic despair—the so-called expectant method of treating diseases—in which patients are left to the sole care of nature and of hygiene. The work of Prof. Stillé itself—we speak with the utmost respect—seems to us to afford the strongest evidence of the utter failure of purely clinical therapeutics. How any one can look over the index of "Therapeutics" and see the long list of the most diverse medicines used in various individual diseases, and still retain his faith, is more than we can understand. Thus, in rheumatism there are between forty and fifty more or less antagonistic remedies. Or, as it may be objected that rheumatism is very variable in its type, let us examine tetanus,—of all

diseases the most constant in its causation, its type, and its symptoms. All of the substances referred to in the index are mentioned in the text as having been found useful in the experience of some one; on very few of them does Dr. Stillé give any opinion based upon personal experience, and, indeed, very frequently he abstains from expressing any opinion whatever. This is, then, the index list: calabar bean, strychnia, aconite, alcohol, cold, heat, nitrite of amyl, wine, tobacco, ether, garlic, belladonna, tartar emetic, chloral, cannabis indica, quinine, colchicum, chloroform, electricity, bromide of potassium, and opium, besides counter-irritation with various substances. In other words, the greater part of the officinal strongest arterial stimulants and the strongest arterial sedatives, of the strongest spinal sedatives and the strongest spinal stimulants, the adding to the system and the taking from the system of the diverse forces of nature, nearly all of the officinal drugs which most profoundly affect the sensorium, the most virulent antagonistic poisons and the most trifling of drugs, all are recommended by experience for the cure of tetanus! Verily, the profession must be worse than a blind man led by the blind, if it does not begin to doubt this infallible guide,—experience. If eighteen hundred years of labor have only this to offer as their fruit, is it not time that we should mistrust the method?

ERYSIPELAS AND CHILD-BED FEVER. By THOMAS C. MINOR, M.D. Robert Clark, Cincinnati.

The perplexing subject of puerperal fever ever and anon attracts a new writer, who is fortunate if he flutter away again with unsinged wings. The little volume before us—one of the latest contributions to the literature of this disease—is an examination of American statistics, aiming to discover what connection, if any, exists between puerperal fever and erysipelas. To many this immediate question seems already decided, and yet all are conscious that about this fever there is a mystery still unsolved. The evidence seems conclusive enough that a disease, called in the mortuary reports of cities and in the statistics of hospitals puerperal fever, is prone to coexist with another disease called erysipelas; but until the varied forms which are comprehended under these names are strictly described, analyzed, and made distinguishable by the average professional mind, the matter will be likely to remain in its present unsatisfactory state. While some observers contend that all cases of child-bed fever are cases of septicæmia, others as decidedly deny it, and argue for the existence of a distinct specific contagious and infectious principle, as distinct as that supposed to exist in the case of typhus and scarlatina; while some levellers would merge all contagions into one universal destructive agent, which, modified by circumstances, produces scarlatina, typhus, erysipelas, etc., at its own sweet will.

Dr. Fordyce Barker, in his recent admirable work on "The Puerperal Diseases," states his belief in a puerperal septicæmia, scarlatina, erysipelas, etc., as distinct and different from true puerperal fever itself,—a disease which he claims to have seen and recognized before labor, in cases where septic infection was impossible; epidemic causes, contagion and infection, producing the true disease; autogenetic infection and direct inoculation or nosocomial malaria, its spurious but equally deadly ally, puerperal septicæmia. The statistics collected by Dr. Minor embrace those of the various States and Territories—in fact, all the statistics of all the States accessible—for all the years recorded,—public statistics in our favored land being as yet in their infancy,—with as many accompanying conditions—elevation, temperature, humidity, season—as possible.

The work, it will be seen, therefore, is one of great value for reference, though the general conclusion reached by the author is guarded, and such as might be

expected, viz., that "erysipelas and puerperal fever seem to prevail together throughout all the States." The author says, in conclusion, that he has at least "the satisfaction of knowing that many pleasant hours have been whiled away in the attempt to throw light on a somewhat obscure point."

GLEANINGS FROM OUR EXCHANGES.

DOLBEAU'S OPERATION FOR STONE IN THE BLADDER—PERINEAL LITHOTRITY (*The Lancet*, October 17, 1874).—Mr. William Ewart calls attention to an operation for the extraction of vesical calculi, which, though really a revival of the old Marian method of "small incision, much dilatation," is also a great improvement upon it, inasmuch as the passage which previously resulted from the laceration of the tissues is now formed by their simple and equable compression. The stone is almost always crushed previous to its removal, whence the name of "perineal lithotritry" given to the operation.

The instruments used are few: a scalpel, a screw dilator, a crushing forceps, and various-sized seizing forceps. The essential feature in the screw dilator is that the blades keep parallel in every stage of their expansion, forming together a cylindrical body, the diameter of which varies with the action of the screw. At rest, the six smooth blades or columns are in apposition, and run up to a common point. They conceal two balls capable of moving up and down along a central stem, and of separating the columns more or less without causing them to diverge. The expanding portion of the instrument measures eight centimetres in length, one and one-fifth centimetres in its smallest diameter, and two centimetres in its largest; the limit of distensibility of the neck corresponding to a diameter of two and two-fifths centimetres. The forceps are of great power, and are so constructed that they can be opened after their insertion without any divergence of their limbs taking place in the thickness of the perineum.

The patient is placed in the usual lithotomy position. The lower limbs are intrusted to two assistants; a third (whose office is responsible) takes charge of the strongly-bent and deeply-grooved staff; his duty is to keep it strictly in the middle line; to make its curve project in the perineum, and later to resist the pressure of the point of the dilator. The incision, two centimetres in length, is made with the blade upwards, and begins immediately in front of the anus, at the brown zone marking the passage of skin into mucous membrane. A deeper incision opens up the perineal fascia, through which the knife, guided by the left index-finger, is thrust into the membranous portion of the urethra. The work of dilatation now begins; and upon the amount of care with which it is accomplished depends in a great measure the success of the operation. Four successive dilatations are employed by Professor Dolbeau. The first stretches the external aperture and subcutaneous tissues. The instrument is next closed, and passed up to the groove of the staff and firmly pressed against it whilst the expanding screw is being turned,—a proceeding that causes the whole of the membranous portion to slit up along the line of incision. The instrument can now be pushed one step farther along the staff, which the assistant slightly depresses. As soon as the membranous region has sufficiently yielded to this third dilatation, the dilator is closed and pushed onward into the neck of the bladder, the staff is withdrawn, and the screw cautiously turned until expansion is complete. The passage thus formed is of uniform calibre, and has smooth walls. This can be felt by the

finger in the dead subject. In the living, Prof. Dolbeau deprecates the use of digital examination. The stone is now within easy reach, and if very small will be removed by the light forceps used in making the first exploration after removal of the dilator; generally, however, it has to be broken up by the casse-pierre. This is introduced without any great difficulty, and, thanks to the broad blunt beak in which it terminates, it obtains an easy grip even of the harder and smoother concretions. Large stones cannot be clasped, but will usually yield to the repeated bites of the instrument. The fragmentation of the stone is often very great; and to extract everything, even with the help of injections, is a task requiring much patience. Before the patient is released from the lithotomy posture, a catheter is always introduced through the natural channel to obtain a crucial proof of the bladder having been cleared. The loss of blood is trifling, and seldom exceeds two or three teaspoonfuls; the wound is minute:—two important considerations in dealing with old age and albuminuria. The bulb is out of the way of danger, and the rectum is not seriously imperilled. The grave surgical complications of pyæmia and of urinary infiltration have been hitherto unknown.*

The patients are generally enabled to leave their beds soon after the operation, often as early as the second or third day.

The operation itself is, however, a long one; it must be conducted slowly to be safe, and of course this necessitates a prolongation of the anæsthesia. It is also difficult, and requires to be studied in all its details, and practised repeatedly, before it can be safely attempted.

NOTES AND QUERIES.

GEORGE LABAR, THE POST-CENTENARIAN.

We briefly chronicled, yesterday, the death of George Labar, of Monroe County, Pennsylvania, which occurred on Saturday last. It was the close of one of those wonderfully prolonged lives which run far back beyond the memory of other living men. George Labar was born in the autumn of 1763, one hundred and eleven years ago, at Mount Bethel, Northampton County, now called Portland, where his baptismal register still exists. He was of French descent, his grandfather settling in Pennsylvania in 1730, a fugitive from religious persecution.

He spent his whole long life among the scenes of his nativity, and retained to the last vivid recollections of the old Indian wars, the Revolution, and the subsequent early events of American history. Nearly seventy years ago he accompanied his parents in their emigration to Ohio, but only remained with them a few days, and returned home. His father lost his wife when he was ninety-eight years old, and the gay old gentleman married again at one hundred! He died at one hundred and five, and was buried in Ohio.

George Labar, who has just died, has preserved a wonderfully hale and hearty condition to the last. He was of medium height, had a large head, well covered with snow-white hair, a keen, quick eye, and a face of strongly-marked features, not much marred by age. In walking, he stooped considerably, but was possessed of sufficient vigor to walk some rods without assistance. Like all centenarians, he remembered General Washington,—in this case there is no improbability in the narration,—and talked enthusiastically over the time when the news of Washington's capture of the Hessians at Princeton spread up the valleys and brought joy to so many loyal hearts. He thought Washington had a charmed existence, and that bullets were powerless to harm him. Once he saw the great general at Easton, then an insignificant hamlet, and he said Washington wore buckskin breeches, silk stockings, and silver shoe-buckles. This aged relic of a former century related these particulars with a zest and earnestness which strongly persuaded one of their truthfulness.

George Labar had never been sick but three times in his life: once with yellow fever, once with camp-fever, and once with typhoid fever. He

used tobacco very freely all his life, both smoking and chewing, but was very moderate in his use of liquors of all kinds. He took daily exercise in the woods, among which he had grown up, felling trees and chopping railroad-ties up to within the last two or three years. It is recorded of him that in 1869, when one hundred and seven years old, he felled trees and peeled three wagon-loads of bark, which one of his youngest sons, a young chap of sixty, hauled to market for him.

George Labar was married in 1788, and leaves a large number of descendants, who are scattered around Monroe County. His oldest son was born in 1791, and married, at twenty-one, a girl of thirteen! Their oldest child is now sixty, and is only fifteen years younger than his mother. In 1870, George Labar had living a sister aged eighty-six, another sister aged ninety-two, and a brother, in Canada, aged ninety-eight, a brisk old boy, who paid George a visit in 1868.

One of the most remarkable features of Labar's longevity is the fact that he voted for General Washington for President, and has voted at every Presidential election since, and *always for the Democratic candidate!* And yet he lived to be one hundred and twelve years old.

George Labar was one of the best-attested cases of extreme longevity on record, and, while his extraordinary prolongation of life attests the value of a good constitution lived out in a rugged experience of out-door life, it presents quite a serious difficulty in the way of the absolute doctrine of the anti-tobacco and whisky theory.—*Philadelphia Evening Bulletin*, October 1.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 1 TO DECEMBER 7, 1874, INCLUSIVE.

STERNBERG, G. M., ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 196, Department of the Gulf, Dec. 1, 1874.

GIBSON, J. R., ASSISTANT-SURGEON.—Granted leave of absence for fifteen days, upon completion of his examination for promotion. S. O. 260, A. G. O., Nov. 30, 1874.

PHILLIPS, H. J., ASSISTANT-SURGEON.—Assigned to duty at Fort Ontario, Oswego, New York. S. O. 236, Military Division of the Atlantic, Nov. 30, 1874.

HEIZMANN, C. L., ASSISTANT-SURGEON.—Relieved from duty in the Department of the Platte, to report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, by letter to the Surgeon-General. S. O. 260, A. G. O., Nov. 30, 1874.

By S. O. 260, War Department, November 30, 1874, the following-named Assistant-Surgeons (recently appointed) are directed to report as follows for assignment to duty:

WINNE, CHARLES K., in person to the Commanding General, Department of the Platte.

AINSWORTH, F. C., in person to the Superintendent United States Military Academy, West Point, New York, for temporary duty.

HAVARD, VALERY, by letter to the Commanding General, Department of Dakota.

HOFF, JOHN VAN R., by letter to the Commanding General, Department of the Platte.

PAULDING, H. OFFLEY, in person to the Commanding General, Department of Dakota.

ADAIR, GEORGE W., in person to the Commanding Officer, Newport Barracks, Kentucky, for temporary duty.

BROWN, PAUL R., by letter to the Commanding General, Military Division of the Atlantic.

MOSELEY, EDWARD B., by letter to the Commanding General, Department of the South.

JACKSON, DONALD, in person to the Commanding General, Department of Texas.

SEMG, BERNARD G., by letter to the Commanding General, Department of California.

SKINNER, JOHN O., in person to the Commanding General, Department of the Columbia.

FINLEY, JAMES A., in person to the Commanding Officer, Fort Monroe, Virginia.

DE LOFFRE, AUGUSTUS A., in person to the Commanding General, Department of the Missouri.

BEDAL, SYLVESTER S., by letter to the Commanding General, Military Division of the Atlantic.

HAMILTON, JOHN B., in person to the Superintendent of Mounted Recruiting Service, St. Louis Barracks, Missouri, for temporary duty.

WILCOX, TIMOTHY E., in person to the Commanding General, Department of the Missouri.

MAUS, LOUIS M., by letter to the Commanding General, Department of the South.

MOSELEY, E. B., ASSISTANT-SURGEON.—Assigned to duty at Columbia, South Carolina. S. O. 197, Department of the South, December 4, 1874.

* In none of Prof. Dolbeau's cases did the prostate resent the pressure to which its tissues had been subjected; and the neck of the bladder always escaped rupture or over-stretching of its fibres.

SATURDAY, DECEMBER 19, 1874.

ORIGINAL COMMUNICATIONS.

EXCISION OF THE HIP-JOINT IN CHRONIC ARTHRITIS OR HIP-DISEASE.

WITH ANALYSIS OF SEVEN CASES OF THE OPERATION.

BY H. LENOX HODGE, M.D.,

Surgeon to the Children's Hospital, Surgeon to the Presbyterian Hospital, etc.

IN preparing a paper for the Philadelphia County Medical Society, I have chosen the subject of Excision of the Hip-Joint in Cases of Chronic Arthritis or Hip-Disease, because I believe it to be a matter of great importance, and one concerning the value of which there has been, and still is, a very different estimate formed by different surgeons. I take pleasure, therefore, in contributing my share towards the practical study of this operation. I have excised the hip-joint for disease seven times, and an analysis of these cases will form the basis of this paper.

Case I.—Clinton L., 4 years of age, was admitted into the Children's Hospital, December 1, 1869, on account of hip-disease of the right hip. The disease had existed for about one year; during seven months of this time he had been under treatment at the Pennsylvania Hospital. After admission into the Children's Hospital he improved for a while, but in November, 1870, he was obliged to return to bed on account of an abscess forming in the upper part of the thigh. While out of bed he had worn an apparatus to keep up extension and counter-extension upon the limb, and while in bed extension was made by means of a weight and pulley. After the formation of the abscess, his health failed very much, and during December and January he was much prostrated by persistent diarrhoea. It was determined, therefore, to make an effort to save his life and remove the disease by an excision of the hip-joint. The operation was done January 28, 1871, by a single incision behind the trochanter in the line of the limb, slightly curved around the trochanter. The head and neck of the femur were easily separated from their attachments, raised from their position, and removed below the trochanters by means of a saw carried below the bone, and some diseased portions of bone were removed from the acetabulum by a gouge. The wound was closed by sutures, dressed with sweet oil, and extension made to the limb by adhesive plaster with weight and pulley. The operation was followed by no ill effects: he had no unfavorable symptoms, and began at once to improve. The diarrhoea ceased, and, as the wound granulated and closed, he gained health and strength. After he left the bed he grew stout and robust. He walked well without crutch or cane, wearing a shoe with the sole and heel thickened about three-quarters of an inch more than the other. He engaged in active sports with the other children, and while playing "tag" would not hesitate to escape the pursuit by climbing into the basement-window. He was discharged well, with the wound closed and the cicatrix well hardened, in October, 1871.

Case II.—Elizabeth S., 5 years of age, was admitted into the Children's Hospital, February 18, 1871, suffering from hip-disease of the left hip-joint, and with a large and painful abscess on the inner side of the thigh. The disease had existed for about two years, and was

believed to have followed a fall from a crib. Since that time she had complained chiefly of pain in the knee. The abscess was opened upon the day of admission, and was followed by temporary relief. Her health, however, soon began to fail very rapidly, and about the beginning of May two other abscesses began to approach the surface. One of these was situated on the outer side of the thigh, and the other pointed above Poupart's ligament. Diarrhoea also attacked the little patient, and she became much emaciated and exhausted. She was so much reduced by these causes, and had such marked hectic fever, that it was thought she could live but a very short time. The abscess above Poupart's ligament opened during the night of May 19. It had been resolved to give her a chance for life by excising the hip-joint, and the operation was done May 20, 1871. Not only was the femur diseased, but the acetabulum and rami of pubes and ischium were involved. Portions of each of these bones were removed, and the denuded surface scraped by the gouge and chisel; the section of the femur was made below the trochanters. The abscess which pointed and discharged above Poupart's ligament was found to communicate with the one in the thigh by an opening through the membrane of the obturator foramen of the innominate bone. A twisted cord of oakum was passed through the wound made for the excision, then carried through the obturator foramen and along the sinus to the opening made by the abscess on the abdomen above Poupart's ligament. This seton was allowed to remain, in order to drain away the discharges. Sutures were inserted to bring the edges of the wound together, olive oil was applied as a dressing, and extension was made by weight and pulley.

The patient, though in such a weak condition, was not depressed by the operation, but soon began to improve. The hectic fever and the diarrhoea gradually lessened and disappeared. The wound granulated and in great part healed. The child was able to sit up in a chair, and gained strength, flesh, and appetite. Her life was undoubtedly much prolonged, and a great amount of freedom from pain was derived from the operation. About seven months after the operation, the liver began to enlarge from amyloid degeneration, which continued steadily to increase. Diarrhoea returned, and at times was very persistent. She emaciated exceedingly, and on the 6th of July, 1872, she died, nearly fourteen months after the operation.

Case III.—Lewis C., 6 years of age, was admitted into the Children's Hospital, September 13, 1870, on account of chronic arthritis of the left hip-joint. He was placed in bed and treated by extension, but abscesses formed and opened on the outer part of the thigh. The child gradually lost flesh and strength, and it was determined to excise the hip-joint. This was done on May 25, 1872, nearly two years after his admission to the hospital. The head of the femur was found out of the acetabulum, lying on the dorsum of the ilium. The head of the femur and the under surface of the neck were carious. The acetabulum was also somewhat ulcerated. The wound did well, and the condition of the patient improved. By the 12th of June the greater part of the wound had healed, but long sinuses and ulcerations from the old abscesses still remained, and required incisions with the knife at several different times. At the time of his discharge—July 24, 1874—he could walk the length of the ward without crutch or cane, but some of the sinuses were not yet healed, and he remained pale, with the abdomen distended from amyloid enlargement of the liver and accumulations of gas in the intestines. He is now living at Germantown, and occasionally reports at the hospital.

Case IV.—Catherine G., 6 years of age, suffering from chronic arthritis of the left hip-joint, was admitted into the Children's Hospital, May 10, 1871. A large abscess gradually formed on the outer side of the thigh and extended from the great trochanter to the lower third of the thigh. It did not cause pain, but contained a large amount of pus. The pus was removed by the aspirator, but gradually accumulated again, and discharged by an opening in the lower part of the thigh. The patient became greatly emaciated and hectic; diarrhoea began and continued, notwithstanding every effort was made to check it. In this most debilitated condition, excision of the hip-joint was made on June 29, 1872. The femur was sawn, as usual, just below the trochanter, but the bone was found so much softened that it was deemed advisable to remove another section of about half an inch. The acetabulum was found perforated by ulceration. The after-treatment was by means of simple dressings of oil, and by extension with weight and pulley. The operation was followed by no bad symptoms, but by gradual improvement in general health, until she recovered flesh and color. She is now quite stout, with a good healthy color. The wound healed perfectly, though slowly, on account of the great extent of the abscess and consequent sinuses. Once after the wound had closed an abscess formed, and it opened again. The limb is useful to her in walking with a thick sole to the shoe, notwithstanding the additional portion which was removed on account of the extension of the disease in the femur. As yet she prefers the use of the crutch, but is gaining confidence as well as ability to do without it.

Case V.—James M. was admitted to the Children's Hospital, March 27, 1872. He was then 10 years of age, thin and weak. His mother died from consumption. During the preceding winter he had complained of pain in his knee. Upon examination, he was found to have chronic arthritis of the left hip. He gave at first no account of any injury; but, upon questioning him closely, he said that one day at school some boys had thrown him down and jumped upon him. He was treated by extension and counter-extension to the limb, and was sent to the Seashore Hospital at Atlantic City during the summer, to give him the benefit of sea-air and bathing. But his general health gradually failed more and more, and it was thought advisable to excise the joint. This was done on May 14, 1873. There was dislocation of the femur on the dorsum of the ilium. Ulceration had nearly destroyed the head of the femur, and the under surface of the neck was carious. The anterior and inferior portions of the rim of the acetabulum were extensively diseased, having sharp edges and being bare of periosteum. The head and neck of the femur were removed below the trochanters, and the diseased portions of the acetabulum cut out by the gouge. The after-treatment was the same as in the other cases. He shows no signs of depression after the operation, nor any ill effects from it. The wound gradually granulated, and in great part closed. He was discharged from the hospital March 23, 1874. He is now living with his parents, and able to go out on errands for household wants. He takes his crutch for use on the street, but is able to walk without it in the house. His general health is good, and his appetite excellent, though he is still thin.

Case VI.—Louis M. has had disease of the hip since 1871, when he was 6 years of age. He lived in Easton, and was treated there by several physicians. At first he was confined to bed, and had splints applied for nine months. Then an apparatus was given to him, and he was allowed to walk about with it. He was finally brought to the Children's Hospital, and admitted June 6, 1873. The disease was then far advanced, and his general health much debilitated. Shortly after admission the hip-joint was excised, and portions of the

acetabulum removed, as well as the head and neck of the femur. The head and neck of the femur were almost entirely absorbed. All that remained of the head was a small nodule of cancellated structure. There were bands of cartilage binding the femur to the sides of the acetabulum, both on the inner and outer surfaces of the capsular ligament. The operation was very well borne. The wound has not yet entirely closed; there are two deep sinuses, with considerable swelling, indicating that there is caries still existing. He moves about the ward rapidly with a crutch, and can walk for a short distance without using it. He has been allowed to go to Atlantic City, and also to his home in Easton on a visit.

Case VII.—Daniel C., 7 years of age, was admitted into the Children's Hospital, April 22, 1874, on account of chronic arthritis of the right hip. He was very pale and emaciated. About four months previously he had received a fall, but was able to walk about during that day. The next day he complained of pain in the knee and hip, and was obliged to remain in bed. He was treated by extension with a weight. An abscess formed and discharged behind the trochanter. The limb became shortened, with very marked inclination of the pelvis. The knee was found, when he was admitted to the hospital, partially ankylosed, but there was a remarkable degree of motion at the hip. On account of the great impairment of his health, it was thought advisable to remove the diseased bone without unnecessary delay. Excision of the hip-joint was therefore done May 6, 1874. The head of the femur was found entirely separated by ulceration, and lying by itself in a pocket in the gluteal muscles, above the great trochanter. The acetabulum was occupied by the extremity of the neck of the femur, and was in good condition except at the lower part of its rim. The femur was divided below the trochanters, and the diseased portion of the acetabulum carefully cut away. The after-treatment was conducted upon the same principles as in the other cases. The patient reacted well after the operation. His pulse—already weak and frequent before the operation—became more rapid. His temperature two days before the operation was as high as 102°. The next day it was 101°, and the day of the operation 99°. The following day it went up to 104°, then gradually declined until it ranged a little above or below 100°, until May 12, six days after the operation, when the temperature increased to 105°. At the same time an erysipelatous inflammation showed itself at the wound, and extended both down the limb and up on the abdomen, and to the genital organs, with marked distention of the scrotum. The temperature declined, the respiration became difficult, vomiting began, and the patient died from exhaustion, May 17, on the twelfth day after the operation. This case is of special interest as being the only one, so far as I know, of erysipelas occurring in our Children's Hospital; and also the only one in the practice of the house, under the care of either Dr. Ashhurst or myself, in which a fatal result has been directly or indirectly the immediate consequence of excision of the hip-joint. The weather after the operation was cold and moist, and the erysipelas appears to have been due, in part, to unusual atmospheric changes.

The first point to which I would direct your attention in our study of these cases is *the cause of hip-disease*. Is it a constitutional disease, or is it due to inflammation resulting from injury? In one of the cases (VII.) the pain and inflammation followed so quickly after a fall as to leave no room for doubt that the injury was the direct and positive cause. In each of the other cases no one injury was distinctly present to the mind of the patient or

the friends as the cause of the disease. But, upon inquiry, some fall, blow, or other injury could almost always be recalled as having occurred at or about the time of the beginning of pain. This coincides with my experience in numerous other cases of hip-disease not operated upon. A slight injury appears to be followed by very destructive results. This would show a predisposition to the disease, and has led many to suppose that the disorder is constitutional in its origin. The question has been earnestly debated whether hip-joint disease is or is not due to tuberculosis or struma. In the cases before us there does not seem to have been any marked hereditary tendency. But few of the parents were consumptive; generally the other children of the family were healthy, and in none of the cases did the child affected give any other evidence of constitutional disease. In none of the cases was syphilis known to be the direct or indirect cause. It is true that this subject is a difficult one for investigation, and that syphilis exists frequently when unsuspected, and that it is a disorder occurring often in hospital practice. Yet the history of these cases shows that for a number of years after birth the children appeared healthy, without any of the evidences of congenital syphilis, and that the fathers, mothers, and children of the same family exhibited no signs of syphilis. In my opinion, therefore, the disorder is generally, if not always, of traumatic origin, but occurs far more readily in those children who are weak and delicate, whether from some constitutional disease or not. This predisposition may be inherited, or induced by poor food, bad air, or attacks of various acute disorders, which impair the health and vitality of the child.

Various names have been applied to this chronic inflammation of the hip, which originally, at least, indicated some theory in relation to the disorder, such as strumous disease of the hip, morbus coxarius, hip-disease, coxalgia, and arthritis of the hip-joint.

The next point of importance is in reference to the *pathological changes* which take place in the structures of the joint and the surrounding tissues. In all of our cases an abscess had formed, and in each of them this abscess communicated with the interior of the joint. Generally these abscesses discharged upon the thigh; but in one case, besides opening on the thigh, the pus had travelled through the obturator foramen, and, rising up within the pelvis, had opened upon the abdomen above Poupart's ligament. In regard to the existence of an abscess entirely exterior to the joint, I have seen no positive case.

The capsular ligament was in every case ulcerated and destroyed to a greater or less extent. In parts it would be thickened by inflammatory action, and in one case (VI.) it was very much strengthened by means of cartilaginous bands, both on its inner and outer surfaces, which were firmly attached to the sides of the acetabulum. The periosteum was always much thickened, and on the neck of the femur separated to a greater or less extent from the bone. The round ligament was found in every case destroyed. The cartilages were more or less eroded over the

surface of the acetabulum, and over the head of the femur they were in great part destroyed or separated from the bone. The changes which take place in the bone will be best understood by an examination of the specimens which I have brought with me. The head and neck of the femur were carious, and even the shaft of the femur was much softened, so that the saw passed through it with very little resistance. The head of the bone was greatly reduced in size by ulceration and absorption, and appeared as a mere nodule. In one case (VII.) it was entirely separated from the neck at the line of the epiphysis, and found in a distant position. The neck of the femur was generally shortened, and its under surface more diseased than the upper. The acetabulum in most of these cases exhibited less disease than the femur, yet in every one was carious in one or more localities, and in Case IV. it was perforated. The effect of the ulceration and caries is to widen and enlarge the acetabulum. This allows the diminished head of the femur to be drawn higher up, and, with the shortening of the neck of the femur, accounts for the shortening of the limb in many cases. In two of our cases (III. and V.) there was complete dislocation on the dorsum of the ilium, and in another (VII.) the head of the femur, separated by ulceration, was out of the acetabulum, and the extremity of the neck pressed against the acetabulum in its place. The greater amount of destruction shown by the femur than by the acetabulum would lead us to believe that in these cases the inflammation began first in the femur. As the disease had in each case far advanced from the primary stage, no positive opinion could be formed whether the disorder had begun in the capsular ligament, the ligamentum teres, the cartilage, or the bone.

We will next consider how we can distinguish hip-joint disease from other disorders or injuries in the same locality or possessing some of the same symptoms, and then point out under what conditions or at what stage the operation is advisable.

The *diagnosis* of hip-disease is usually very easy, and especially so in the later stages. The pain frequently felt in the knee is only apt to mislead early in the progress of the disorder, before any question of operative interference is thought of. It sometimes happens, however, that there is arthritis of the knee and of the hip at the same time. The slightest examination will, in ordinary cases, show the rigidity, the deformity, and the pain upon attempted motion at the hip. From traumatic dislocation, the evidence from the history of the case will generally leave no doubt in the mind as to the diagnosis. Congenital dislocation or malformation of the articulation has deceived at times some careful observers. As, however, the child is usually in good health, the question of excision is not likely to be considered. This disorder is comparatively rare. I have myself seen only two cases. It is first noticed usually when the child begins to walk, and the lameness is for a long time on the increase. It is not until the femur finds a secure resting-place, and the surrounding structures become accommodated to the deformity, and the disproportionate

development of the two limbs ceases, that we can hope for an arrest of the increasing lameness. There is no pain at the hip or knee; there is no rigidity, but, on the contrary, increased mobility. There is shortening, but by extension it can be at once completely overcome. The gait is peculiar, the pelvis yields to the affected side, the movements are quick, free, and without pain. If the child is placed upon a chair, it will jump upon the floor as fearlessly as a well child, and will make no effort to save the limb from the jar.

The cases which are most like to hip-disease in the later stages are those in which there is caries of the sacrum or innominate bone, with an abscess pointing in the region of the hip. I have charge at the present time of a little girl who has caries of the lower lumbar vertebræ and of the sacrum. She has had repeated abscesses, and some of these have opened on the buttock close to the hip; in others, the pus has travelled nearly to the middle of the thigh; and twice an abscess has formed and pointed on the inner side of the thigh close to the pubes. In this case there is great rigidity of the limbs, and one of them is strongly flexed and greatly abducted. In such a case as this, an examination, carefully made, of the joint by manipulation while the patient is under the influence of ether or chloroform, will show that the hip-joint remains unaffected.

In caries of the spine with a psoas abscess there is also a condition of affairs which simulates hip-disease. An inspection of the spine, combined with an examination of the hip-joint while the patient is under the influence of ether, will make plain the true location of the disease.

There is another injury which may be mistaken for hip-disease, and therefore we will allude to it, although it is extremely rare in childhood: namely, fracture of the neck of the femur. Such a case as that in our series marked VII. might be confounded with, and, indeed, was mistaken for, a fracture of the neck of the femur by the practitioner who first saw the case. The head of the bone had been separated by ulceration, and therefore the symptoms resembled somewhat those in which the neck of the bone is broken by injury. There was shortening, increased mobility, and no rigidity. But the history of the case showed that he had walked for a day after the reception of the injury; this, with the gradual formation of an abscess, the impairment of the general health, and the symptoms persisting and increasing long after what would have been the case if the bone had simply been broken by a fall, made it plain that the case was one of hip-disease.

In order rightly to estimate the true *value of excision of the hip-joint*, we should keep in mind the result of the disease if left to the best medical and surgical treatment without operation. In the early stages, almost every case can be greatly benefited or cured. In order to accomplish this, a long time will usually be required, and much care must be exercised, not only on the part of the practitioner, but also by the nurse and parent, in order to secure the fresh air, the good diet, and the proper adjust-

ment of the different forms of apparatus employed. But, as these cases ultimately get well, no question of operation is to be considered. In the later stages, however, when an abscess has formed and the bone has become carious, from prolonged suppuration visceral disease is apt to be induced, and there is great danger of the patient dying from exhaustion. Under favorable circumstances, children even at this stage may ultimately recover, and the limb may be of good service afterwards.

We have now under observation at the Children's Hospital a child of remarkable powers of constitution, who has passed through the different stages of hip-disease, including abscesses, and yet is in a fair way to recovery, even with motion at the hip, and is now in robust health. She has, indeed, been constantly under treatment for about five years. At one time her health seemed greatly to fail: diarrhœa set in, and persisted for several weeks. It was then decided in consultation that the operation would be necessary. She was, however, attacked with measles, and after this disorder had passed away her condition again improved, the diarrhœa ceased, and the suppuration diminished. The attack of measles, on account of the reaction which followed, seemed to have been of positive benefit to her.

In these later stages of hip-joint disease those who are of good constitution and strong may recover, but the weak and those of delicate constitutions, after a long and painful illness, will be likely to die. When the health begins to fail,—and we should not wait until too much ground is lost,—it becomes a serious question to determine what we shall do to save life; and the choice lies between *excision* and *amputation*. By excision we save a limb, which the above cases show may be of great service, and the operation, therefore, is much to be preferred to amputation, if not much more dangerous to life. In our seven cases only one death occurred shortly after the operation, and only one other more than a year after excision in a child who would probably have died in a few weeks if no operation had been done.

Dr. Sayre, of New York, writes to me that he has operated fifty times, and that the percentage of death before the wound closed is about twenty-five per cent. Or if we study the large number—three hundred and seventy-six*—collected by my friend Dr. Ashhurst, we find the percentage of mortality a little less than fifty per cent. The same authority has collected eight cases of amputation for hip-disease, and of these four died. Thus, so far as any inference can be drawn from statistics in which there is such disparity in the number of cases, the death-rate is about equal. Therefore, at the present day every one gives the preference to excision, as by it, without duly increasing the risk to life, we save the limb. In some exceptional cases, when the femur is diseased to a great extent in its shaft, amputation would be advisable. I have never seen a case to which it was applicable. Again, it may be at times necessary to amputate after unsuccessful incision. This, also, I have not had occasion to do or to recommend.

* This number does not include the seven cases described in this paper.

In studying the statistics of any operation, we should know not only how many died and how many lived, but also what was the condition of the patient prior to the operation, what was the cause of death, how long after the operation it occurred, and what was the condition of the patient as regards health and usefulness of limb in those who recovered. The percentage of success or of failure is very different, according as the operation is limited to favorable or to unfavorable cases.

In each of our seven cases we believed that death would result, after a painful illness, in a longer or shorter period, if no operation was done. In several of these cases death seemed imminent, and would have probably resulted in a few weeks without the operation. The cause of death in one case was erysipelas; and death occurred on the twelfth day after the operation. In the other case the cause of death was exhaustion, after prolonged discharge from a pelvic abscess, on the four hundred and eleventh day after the operation.

The condition of the patient's health in all who recovered after the operation was improved, and the limb more or less useful. In the case of Clinton L. (I.) there was everything that could be desired: the motion was perfect, and the muscular control of the leg complete; but it was necessarily shortened, and its mobility at the hip greater than natural. In some of the others there still remain sinuses and more or less evidences of inflammation which impair the usefulness of the limb. If these subside, the limb will become of greater value than reported above.

As regards the word recovery, we should not confound recovery from the effects of the operation with recovery from the disease. In the above cases all but one recovered from the operation, but it is still undecided how many will recover from the disease. One of those who recovered from the operation afterwards died of the progressive disease.

There is another comparison which we ought to make, and that is between the *value of the limb* left after excision when the cure is complete, and that left under similar circumstances when no operation has been done. The limb after excision is perhaps a little shorter than that after the natural cure, but it has greater mobility, with equal firmness and strength, and is therefore the better. In the case mentioned above, of natural cure, the mobility of the limb promises to be good; but generally there is more or less ankylosis. In the case of a gentleman whom I lately saw in my office, who had recovered from double hip-disease, from which he suffered in his childhood, there is so much ankylosis at the hips that, although he can walk quite rapidly, his gait is very peculiar, and consists in a rotary movement of the whole body, with flexion and extension at the knees and ankles, while the motion at the hips is hardly perceptible.

After excision, where does the extremity of the femur rest? In the majority of successful cases there is reason to believe that it is drawn against the acetabulum by the rectus muscle, chiefly by means of the tendon attached to the rim of the acetabulum.

After excision, does ankylosis result? Only in a few exceptional cases. Generally there is liga-

mentous union with more than normal mobility, and yet with enough firmness to give a useful limb.

Should *disease of the acetabulum* be an objection to the operation? If so, each of the above cases would have been thrown out, as in all it was found necessary to remove portions from the acetabulum. But even large pieces of the pubes and ischium have been removed with success, as in the remarkable case of Mr. Erichsen.

Should the operation be done if there is extensive *visceral disease*? In such cases we cannot hope for complete recovery of the health, but we may relieve the patient from pain, and prolong life; and under such circumstances the operation may be advisable.

If *hectic fever* exists, should the operation be done? The hectic fever may be due entirely to the condition of the joint, and in such cases will disappear when the source of irritation is removed. If, however, the hectic is due to tubercle in the lungs or to other disease that cannot be removed, the excision would be useless unless to relieve from pain.

If an *abscess* exists which has never opened, should it be opened first and the operation be done some time afterwards, or should it be opened at the time of the operation? If there is no urgency from pain, then it would be better to open the abscess during the excision, and not before, as there is apt to be depression after opening of such a chronic abscess, which would be probably lessened by the removal of the cause of irritation at the same time. But if there is much pain, then the abscess should be opened, in order to give relief to the severity of the pain, without waiting until arrangements can be made for the operation. I was lately called in consultation with Dr. Newcomet to a distant part of the city, and found a lad of about fourteen suffering intensely from a large and deep abscess at the hip, due to hip-disease. It was necessary to relieve the patient at once, and I promptly opened the abscess. It would seem advisable to wait until the patient has recovered from the effects of opening the abscess before resort is had to excision. I therefore advised in this case to wait for at least ten days or two weeks, if everything went well.

What *age* is most favorable for the operation? There seems to be a great difference in favor of childhood, and statistics would indicate that the best period is that between the ages of five and ten years. My own cases were, respectively, five, five, eight, seven, eleven, eight, seven, years old. Of these, the one that died soon after the operation, from erysipelas, was seven years of age, and the one that died one year after the operation, exhausted from a pelvic abscess, was five years of age at the time of the operation.

As regards the manner of performing the operation, it seems to me best to make the incision behind the trochanter, to allow of easy drainage from the wound. It should be long enough to allow of full exposure of the portion of the femur to be removed. A simple linear incision, extending above and below the trochanter, and slightly curved at the position of the trochanter itself, answers every purpose. It should be carried down straight

to the bone through the periosteum. The periosteum should be separated from the bone, and preserved as much as possible. The closer the operator keeps to the bone, the better: he injures the surrounding tissues less, and there is far less hemorrhage. The periosteum that is retained will aid in the recovery of the bone, and may, in part, reform the portion removed. It is easier and better to raise the head of the femur and carry the saw below it, than to make the section first by keyhole- or chain-saw beneath the bone without having disarticulated or raised it. The ligamentum teres being destroyed by the disease, there is no difficulty in raising the femur from the acetabulum, or from any other position it may have assumed. Care must be taken in moving the thigh, and but little force employed, as the femur can easily be broken, and this has been done in a number of recorded cases. If this should occur, however, good union may be looked for. The section with the saw had better be made below the trochanters, as otherwise the great trochanter is apt to press upon the wound and even to protrude. If any portions of the acetabulum or pelvis are found diseased, they should be removed by the gouge or forceps. A few sutures should be used to bring the edges of the wound together, and any simple dressing may be applied. I prefer that the limb should be placed in the extended position, and that it should be kept so by a moderate extending weight attached to the limb by adhesive strips. This plan is very comfortable to the patient, and enables the surgeon to dress the wound with greater facility than by any other method. The tendency of the muscles to spasmodic contraction is prevented, and the rough sawn extremity of bone is prevented from irritating the surrounding structures.

It has often surprised me to see the freedom from pain or serious symptoms after this capital operation; and, upon a review of the whole subject, I do not hesitate to recommend it to the careful consideration of every member of this Society, as I believe that the operation has not been done as often in this city as it would have been if the benefits accruing from it had been more generally understood.

QUININE IN PERTUSSIS.

BY JOHN W. KEATING, M.D.

BELIEVING that those more fortunate members of the profession who are placed by circumstances in a position to note the action of remedies in the treatment of epidemic forms of disease should make public the results of their investigations, I beg leave to add my few drops to the great river of experience.

In the early summer months of this year, while resident physician in the children's ward of the Philadelphia Hospital, I had occasion to see an epidemic of measles and whooping-cough, which diseases occurred at the same time and ran their course together. Owing to this fact, and also that, as all know, the children are none of the strongest, the mortality was rather large,—forty per cent. I was much interested at this time in the controversy

as to the possibility, by medicinal means, of cutting short an attack of whooping-cough, and I availed myself of the uncomplicated cases to test the remedies proposed.

From the first, I found quinine to be the most reliable.

The number of cases was large, and, as is usual in a hospital, the number of nurses small, so that I was obliged to abandon the idea of noting the frequency of the paroxysms in every case, and could only limit myself to the few who had their mothers constantly with them, and where the intellectual capacity of the latter enabled them to interest themselves in my experiments.

As an example, I shall narrate one case which was particularly interesting, as the disease was extremely severe, and was uncomplicated. This child was fifteen months old, had been sleeping with its mother, who was an assistant-nurse, in the room with the other children, most of whom had both whooping-cough and measles, and took whooping-cough, the attack of measles being deferred till a later period.

For twenty-four hours the mother carefully noted, by pin-holes in a card, the number of paroxysms. I then ordered one-half grain of quinine every hour during the day, the same dose to be given every two hours during the night. At the end of twenty-four hours I again had the "coughing-spells" noted. They had diminished in frequency exactly *one-half*. This experiment was often repeated, with the same results, until the end of a week, at which time the paroxysms were very few, but had not diminished in severity.

As an example of the same result in an older child, I may mention the case of a girl about fifteen years of age, who came to Philadelphia suffering from a severe attack of pertussis. The child was particularly annoyed by the severe nocturnal coughing-spells, which nothing seemed to relieve. I placed her upon the quinine-treatment, and the result was really wonderful; I may say that after the first day she coughed but little, and in less than two weeks the disease had entirely disappeared.

In order to avoid repetition, the conclusions which I arrived at are given, as follows:

1. That in most cases quinine, given in solution, will diminish the frequency of the paroxysms of whooping-cough, provided it be given in sufficiently large doses.
2. That quinine can be given to children in proportionally much larger doses than to adults, but that in very young infants it is contra-indicated, as it always causes vomiting.
3. That carbonate of ammonium will in almost all cases relieve the severity of the paroxysms, and consequently should be given in conjunction with quinine when this indication for its use exists.
4. That the dose of quinine for a child of two years should be at least ten grains daily, in divided doses: it should be watched carefully, and increased if it produces no effect. For a child of twelve years begin with fifteen grains daily, and note the effect of each dose. The drug should be frequently discontinued for a day or so, as it seems to lose its effect.

I merely offer this as the result of observation in one epidemic, for I know that the value of this treatment is acknowledged by some and denied by others.

RATTLESNAKE-BITE.

BY WILLIAM J. WILSON, M.D.,
Assistant-Surgeon U.S.A.

MR. JOHN R. MAGRUDER (son of the late Dr. Hezekiah Magruder, Washington, D.C.), now residing about twenty miles from this post, engaged in mining and smelting copper, informed me about three months since that one of his Mexican laborers had been bitten in the calf of the leg by a rattlesnake. Another Mexican went out, looked about for a few minutes, found a plant, chewed up some of its leaves, and applied the bolus to the wound, when the swelling (which had become considerable) disappeared in a short time, and the man recovered.

I requested Mr. Magruder to procure for me a specimen of this same plant, which I forwarded to Assistant-Surgeon J. J. Woodward, U.S.A., Surgeon-General's Office, Washington, and he sent it on to Professor Asa Gray, of Cambridge, who identified it as the "*Acerates decumbens*," or the "*Anantherix decumbens* of Nuttall," a plant belonging to the milk-weed family.

My experience of its virtues is *nil*, as I have not been fortunate enough to see a case of rattlesnake-bite for a long time; but Mr. Magruder is a gentleman whom I have known intimately for the past two and a half years, and his statement is in every way reliable. I present it through your columns to the profession for what it is worth, and because I know from repeated inquiries I have made that the Mexicans depend upon it as an unfailing remedy. I would be very glad to have it tried in such cases, and the results published in some medical journal, for the benefit of myself and other members of the profession.

FORT BAYARD, N.M., Nov. 20, 1874.

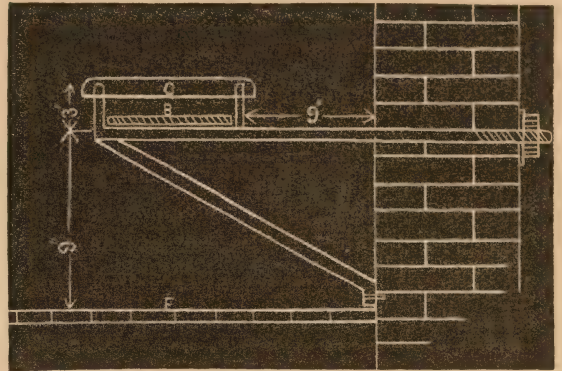
A NURSERY SPRING-BOARD.

BY DWIGHT D. WILLARD.

THE sketch is a working one of a valuable hygienic appendage to a nursery, which I have had in use for years. Any blacksmith can easily make, of one-inch round iron, two frames, as shown, and erect them eight to ten feet apart. Placed upon the wall rather than upon the floor, they avoid the vibration and injury to the ceiling below, and also much of the noise. The noise can be still further reduced by india-rubber bearings attached to the spring-board.

This board—a plain strip of clear-stuff seasoned hickory—may be, say ten by one-half to three-fourths of an inch, giving any desired degree of elasticity. The middle of mine will barely touch the floor with my weight. It lies loose upon its supports, but projects a few inches, being kept from creeping by iron pegs in the edges, some three inches

apart on each side of either upright. A wooden cap (C) resting upon the tops of these uprights wards off harm from the children. It takes up no room, as it perfectly answers for a seat or a low table; it will not break or wear out (quite an object with a play-



F. Floor. B. End-view of spring-board.

thing); it is always in order; it can be used by one or several at the same time; and it is the most popular article that ever went into a nursery. Accidents are almost impossible. The child should have something—say a wire window-screen—to grasp when it desires, and the exercise can vary from the lightest motion for a young baby, to the most violent jumping.

Mine is never tired of, and I largely attribute the overflowing vitality of my five youngsters to its constant exercise. It is not patented.

1714 SPRUCE STREET, PHILADA.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF PROF. JOHN NEILL, M.D.

Reported by WILLIAM ASHBIDGE, M.D.

POPLITEAL ANEURISM—DIGITAL COMPRESSION.

J. S., white, unmarried, aged 42 years, male, was admitted into the hospital, October 28, 1874. He stated that he had always enjoyed good health, and had never been prevented by illness from working at his trade, which was that of a painter. Many years ago he contracted a syphilitic sore, which was followed by secondary manifestations. Upon admission he stated that six weeks previously, while aiding in raising a heavy ladder, he felt something give way in the popliteal space of the left leg, and upon examination, soon afterwards, found a pulsating tumor. In a short time the left foot and leg became congested, and he also had considerable pain in them, which, however, varied in intensity from time to time, and for relief from which he had taken large doses of laudanum. Three weeks after the accident, the physician who had charge of the case attempted to keep up digital compression of the femoral artery, but, as it was in the country, and skilful assistants could not be readily obtained, this treatment was only continued during twelve hours. Upon examination, it was found that the man had a popliteal aneurism upon the left side, which appears to be of about the size of a hen's egg, and of the sacculated variety. On the 31st of the month he was presented to the class, and, after discussing the relative merits of the various modes

of treatment of popliteal aneurism, the preference was given to that by digital compression, and it was determined to carry out this treatment with the assistance of some of the gentlemen of the class.

By auscultation over the heart and the origin of the great vessels, a bruit was detected which gave reason to fear that changes of an atheromatous character would probably be found in the arteries.

Digital compression was commenced at 10 P.M. on the 2d of November, and was kept up until 7 A.M. on the 5th; altogether for a period of fifty-seven hours. During the first night the patient bore the pressure pretty well, and dozed considerably when moderately under the influence of opium. The bladder was evacuated with the catheter at 12 M. on the 3d. During this day he took his food regularly, and the administration of morphia hypodermically was kept up. The foot was cold, and the collateral circulation did not seem to be well established. Pulsation was still to be distinctly felt in the aneurism, although it was not so marked as at first. During the night of the 4th and morning of the 5th signs of exhaustion became apparent, and but little opium was given. The bowels were opened freely and naturally on the morning of the 5th. When compression was discontinued at 7 A.M. on the 5th, the man was weak and restless, and suffered a good deal of pain, and for the relief of these symptoms the administration of opium was resumed. The foot was cold and livid in hue, and was surrounded with cotton, and bags of hot water were placed alongside of it. Tonics and stimulants were freely administered, and were borne; but, although food was taken in good amount, and apparently digested, the man's strength rapidly failed. On the 8th, no pulsation whatever could be detected in the tumor. On the 9th, blebs formed upon the foot, and the skin became darker and mottled. No distinct line of demarcation formed, but the redness slowly ascended the limb. On Saturday, the 14th, it was decided to amputate through the lower third of the thigh, without waiting for the formation of a distinct line of demarcation. The operation at this time was deemed advisable because the strength of the patient was rapidly failing, and, as the entire foot was gangrenous, it was feared that in the condition in which he then was he could not much longer sustain the exhausting process which was going on. The amputation was performed before the class on the 14th; oval skin-flaps followed by a circular section of the muscles being made. The cut edges of the femoral artery manifested a decided tendency to erosion, and many of the muscular branches were enlarged so that numerous ligatures were needed; venous blood issued in jets from the vein, and that vessel was also tied. But a small amount of blood was lost during the operation, and the stump was soon closed and dressed. The man reacted but slowly, and moderate doses of brandy were given him. Until Tuesday, the 17th, his condition was tolerably good, but on that day his appetite failed. On the 18th, the dressings which were applied to the stump at the time of the operation were removed. The anterior flap was found to be pale and bloodless, presenting an appearance which was not at all satisfactory, while the posterior flap looked very well. At 1 A.M. on the 19th violent hemorrhage occurred, and so much blood was lost before it was entirely controlled that death occurred at 2 P.M. on the same day. No post-mortem examination was obtained.

The aneurismal tumor, upon examination, was found to be of the size of an egg, and sacculated, and was entirely filled by a firm laminated clot. An effort was made to inject an antiseptic solution into the vessels of the portion of the leg which had been amputated, but it was found to be impossible, as they were evidently in a very abnormal condition.

TRANSLATIONS.

SPONTANEOUS COMBUSTION. — M. Chassaniol, of Brest, recently presented to the Société de Chirurgie a communication on this subject. From the report of M. Horteloup on this paper we extract the following:

After having shown that no person worthy of credence had ever been present during a spontaneous combustion, and that in consequence science possesses no authentic facts on the subject, he passes in review the various experiments and different theories which have been proposed for the explanation of this phenomenon.

The most ancient notion was that the long-continued use of alcohol might, by impregnating the tissues with this fluid to the point of saturation, provoke spontaneous combustion. But it has been demonstrated that dead bodies or portions of the same, immersed for a longer or shorter period of time in spirits of wine, burn with great difficulty. It has also been attempted without success to set fire to the expired air in animals into whose veins ether and alcohol have been injected.

Spontaneous combustion has also been explained as the result of the action of electricity. It has in addition been attributed to the presence in the human body of a gas inflaming spontaneously on the approach of a light; but precise analyses demonstrate the absence of the phosphurets of hydrogen in all parts of the economy. Of late years it has been sought to refer the occurrence of spontaneous combustion to the same causes as in the case of spontaneous inflammation of various porous bodies, such as straw, hay, flax, etc. Here, again, the comparison is impossible, since combustion is due in these cases to the influence of chemical phenomena, the conditions of which are not found in the human organism.

It is thus seen that it is impossible to form any theory which shall admit spontaneous combustion. M. Horteloup does not conclude that the idea is to be entirely rejected; he simply maintains with Tardieu that it is not theory and experiment to which appeal should be made, but rather observation.—*Bull. Gén. de Thérap.*, Nov. 15, 1874. A. V. H.

THE ANTIPYRETIC TREATMENT OF FEVER (*New York Medical Journal*, November, 1874).—Dr. Leroy M. Yale, in an able and elaborate paper, endeavors to make evident the following propositions:

1. That there is an exact regulation of the heat of the human body in health, the production corresponding to the loss, but that excessive abstraction of heat may overcome the power of production.

2. That the same laws govern the high temperature of fever, with the exception that the producing power is more speedily exhausted.

3. That the danger in acute pyrexia is due not so much to consumption of tissue and consequent exhaustion, as to tissue-changes incompatible with life, caused by the elevation of temperature, and that this danger is proportional to the height and continuity of the fever.

4. That the indication is to abstract heat and limit its production in all cases in which the temperature is so high as to make the danger from it greater than that from exhaustion.

5. That in the use of cold water we possess an agent adequate to overcome the heat-producing power.

6. That we possess certain drugs that have the power of interrupting the excessive heat-production.

7. That the statistics of the antipyretic method are exceedingly favorable, when compared with those of any other plan of treatment, for all forms of acute pyrexia, whether with reference to diminished death-rate or to mitigated suffering.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, DECEMBER 19, 1874.

EDITORIAL.

DR. ERICHSEN'S ADDRESS ON AMERICAN SURGERY.

WE have read with great pleasure the report of Dr. Erich Erichsen's address on the above subject, delivered at the University Hospital College, London. We cannot afford the space to reprint the report in full, but republish portions of it under the heading of "Notes and Queries." No doubt the address itself will interest more than would any of our comments, and, not having space for both, we postpone the latter.

LEADING ARTICLES.

"BERMUDA AS A WINTER RESORT FOR INVALIDS."

ON the approach of a season like the present it becomes the duty of many physicians to give advice to their patients (particularly those having phthisis) as to a sojourn in a more mild and equable climate.

It is not my purpose to speak of the various places which are recommended for consumptives, but to refer only to one, and that the Bermudas.

Of them I speak only because quite recently a circular or pamphlet containing an account of the Bermudas (a reprint from *Harper's Magazine* of March, 1874) was distributed to a number of physicians of this city by the agents of the "Quebec and Gulf Ports Steamship Co."

The account is charming, and one which would elevate the waning hopes of an invalid, as well as invite the tourist.

The trite old adage of "One story is good till another is told," is applicable here. A letter bearing date Bermuda, March 12, 1874, came under my observation, in which the writer alludes to the *Harper's* article, and says, "You may contradict the part on climate from my own experience," and farther on says, "Pray do, in the cause of humanity, keep consumptives at home." Having friends who have *spent two winters* in the Bermudas, I sought information, and this is the purport of the reply: "Never send a consumptive to the damp and variable climate of Bermuda." The voyage is rough, and attended with danger. There is lack of suitable food for invalids, and much of what is to be obtained is sent from here. "The climate has become colder, with fearful storms," and, though the sun be warm, the stone houses are cold and damp, with mould upon the walls, and but little convenience for fires, this being the case even in the best hotels. Extortion is practised whenever a safe opportunity presents. My informant further states, "If you had seen the sick suffer for the ordinary comforts of life, as I have, you would urge them to stay at home."

As confirming the above statements, I here give a letter which appeared in the *New York Post* in May last.

"TO THE EDITORS OF THE EVENING POST:

"The article on Bermuda in your paper of Tuesday, May 12, is so erroneous in important particulars that the writer is prompted to urge the publication of a refutation.

"Permit the travelling public to learn truth from dear experience, but do not permit consumptives, who are infinitely better off by their own firesides than in Bermuda, to be deceived. In the city of Hamilton there is one private boarding-house, accommodating five persons; of hotels, the Metropolitan, second class, where no Americans stop, and one similar to it on Front Street, kept by a colored woman.

"The choice of the invalid public is therefore the Hamilton Hotel, which is finely situated, but so wretchedly kept as to be almost beyond description. In this house the writer spent three months of the past winter. The diet was monotonously bad; the walls were mouldy from excessive dampness; and the thermometer as low at times as 45°. But four rooms in the house are adapted for fire.

"There were not two lines of steamers during the winter, and for nearly a month no tidings were received from New York. The steamer *Perit* broke her machinery on the December trip, after which she was laid up, and now she has broken it again. The *Canina* is seaworthy. The voyages of the former have seldom been less than a week in duration, while the latter, belonging to the English line, is fast.

"But the passage is stormy and dangerous at best, lying in one of the most turbulent latitudes of the ocean. Well have the 'still vexed Bermoothes' maintained their reputation since Shakspeare's day. The climate is too variable for pulmonary disease, and a weather-record kept by an invalid this year showed the following result:

in the month of January, twenty-one days of rain; in February, fourteen days; and in March, twelve days, with gales of fearful weather, and a hail-storm about the 10th which penetrated the roofs of the soldiers' huts at Prospect.

"Bermuda has been written up extensively of late by those interested in its advance, but, in the cause of humanity, do not allow the dying to go there ignorantly to shiver and starve.

"The statements with regard to the army and navy are entirely over-estimated. There are two regiments of one thousand men each, and a small corps of engineers, while of men-of-war not more than six have visited those waters in many months.

"Bermuda's prosperity passed away long ago, but was galvanized into transient life by the blockade, when she made money at our expense. The climate alone will prevent her becoming a resort for invalids, however much the proprietors of the steamships may desire it.
E."

With such pictures as these (and a personal knowledge of the writers of these letters enables me to vouch for their truth), we certainly cannot recommend to our patients such a place for the winter. One of the writers suggests Nassau, Cuba, and Santa Cruz as fitter places.

A. C. W. BEECHER, M.D.

CORRESPONDENCE.

MILK-SICKNESS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—We are having this fall a regular epidemic of what is generally called milk-sickness or trembles. I have treated upwards of thirty cases.

In the subacute form, the individual is languid, and unable to make any exertion of body or mind; the appetite is variable, the bowels rather torpid, palpitation of the heart and slight stiffness of limbs are complained of, general tremblings are present, and if any considerable exertion be made, or if the taking of food be left beyond the usual time, nausea is felt.

In the acute form, the individual is suddenly seized with extreme nausea, prolonged vomiting, faintness, and prostration. The temperature of the body and extremities falls below the natural standard, but not more than one to two degrees.

The skin grows cold and clammy; great distress and anxiety are depicted on the countenance; the breath acquires a peculiar odor, as does also the whole body; the tongue is generally natural, moist, and clean, although the bowels become obstinately constipated. A complete loss of function in the stomach comes on, with incessant emesis. At every effort of vomiting, a fluid is ejected, of variable appearance: it is sometimes colorless, at other times like indigo-green, and sometimes like coffee-grounds.

As the disease advances, sharp pains in the limbs and neck are experienced, as well as acute gastric pains,

accompanied by a peculiar and intense sense of heat in the mouth. The patient is continually calling loudly for water or ice. The pulse is more frequent than at first. At the beginning of the disease it is generally about forty to fifty; after four or five days it rises to sixty or eighty, or even beyond this.

The nature and cause of the affection are not known. The poison is in the milk and butter, as I have treated cases where persons in the country had the disease, and the persons in the town who used the butter made in the affected dairies were also attacked.

The treatment here generally employed is simple: calomel, and ice in the mouth, with whisky freely administered as the main portion of the treatment. Blistering is not used as it formerly was, which is also true of opium. Of my thirty cases, all are now well; one patient had the disease five times,—once a month.

C. H. SMITH.

KENTON, OHIO, NOV. 20, 1874.

POISONING BY ODONTOCROLL.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Allow me to offer to your notice a case of peculiar interest in my practice. My only apology for so doing is to inquire if there are parallel cases on record, and, if so, the principal points of their treatment. It is interesting to the profession, for the reason that the compound afterwards mentioned is in use among our dental brethren, and any practitioner may be called suddenly to a similar case, and be at a loss how to act, as I was.

I was hastily summoned, on Monday evening, the 19th ult., to administer electricity to a man, supposed by the messenger to be dying, who had been carried to a physician's house. The patient, Mr. W., is a chemist, and, during the practice of his profession, has discovered a combination of hydro-carbons which had been found by himself and a dentist of eminence to be a very successful remedy for odontalgia. The compound, called "odontocroll," or "carvocroll," is a heavy, oily liquid, of smoky odor and taste, and has been introduced in the dental market as a local anæsthetic for toothache. Mr. W., the dentist, and a friend met in the chemist's laboratory, in this city, and further tested the drug by placing a few drops upon smoking-tobacco and inhaling the vapor. Mr. W. placed ten drops in his pipe, and, having smoked in the usual manner for a few minutes, poured ten more drops in it. After puffing a few times, he suddenly dropped, insensible, upon the floor, but in a few seconds revived entirely, and insisted upon resuming his smoke. To this his friends objected, and, during the discussion following the refusal, he again became insensible. They then removed him about two blocks, to Dr. D.'s office, and on the way thither he fell to the sidewalk, "collapsed," two or three times. This happened at nine P.M. I reached him at ten, and while I was listening to his story he fell upon the floor again, unconscious.

This had happened several times since he had reached the office. Upon examining him during his fall, I found the countenance somewhat dusky, the pulse normal in force and frequency, all the voluntary muscles relaxed except the abdominal, and the pupils responding quickly to light. I endeavored to arouse the breathing, which was completely suspended, by placing one pole of the battery over the right phrenic nerve, and the other over the stomach, using the current from one cell, interrupted and secondary. This I repeated during two successive attacks; but the electricity did not seem to quicken the return to consciousness or respiration. The only appreciable effect was to make him complain of great weakness as soon as he could speak, and, fearing the too prolonged influence of the battery, I suspended its use. The suggestion was made that another physician should be summoned, and an old experienced practitioner was called in at eleven. He advised the administration of brandy, of which about half an ounce was given. The attacks gradually became less frequent, and, after some time, gave premonitions of their approach by grimaces and bodily contortions, which were invariably followed by the insensibility. At half-past twelve we called to our aid two policemen, and removed him to his home, about three blocks distant. He struggled hard all the way, evidently from the effect of the brandy, but as soon as he was placed in bed became quiet, and had no more attacks during the night. In the morning he reported himself as feeling as well as usual, though somewhat weak and sore from his falls and struggles on the way home.

The unconscious state lasted usually from twenty to thirty seconds, came on suddenly, and passed off as quickly as it came on. During this time respiration was entirely suspended, and all sensibility lost. The conjunctiva and dorsum of the tongue were repeatedly touched without producing any reflex muscular action, and his appearance was that of a person in a state of complete anæsthesia. While conscious, he acted as usual in perfect health, nor was he himself aware, by any premonitions, of an impending seizure. Nothing was given him but some aromatic spirits of ammonia and the brandy mentioned.

Will you be kind enough to offer me such suggestions as to the cause or treatment of the case as your valuable time or space will permit?*

P.

BRIDGEPORT, CONN., November 19, 1874.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

CONVERSATIONAL meeting, November 18, 1874. President, Dr. WASHINGTON L. ATLEE, in the chair.

Dr. H. LENOX HODGE read a paper on Excision of the Hip-joint in Chronic Arthritis or Hip-Disease, with analysis of seven cases of the operation.

* The editor of the *Times* knows nothing about the action of odontocroll, and whilst exceedingly interested in the account of the poisoning, whose symptoms were very strange, is unable to throw any light upon the matter. Can any of our subscribers do better?

Dr. J. C. MORRIS asked whether he had observed an excess of phosphates in the urine.

Dr. HODGE said he had not. His attention was particularly called to the urates, as the digestion is not good. The urine is generally clear.

Dr. L. K. BALDWIN asked whether any trace of syphilis was observed in connection with the cases.

Dr. HODGE said he had no proof of syphilis in connection with any of the cases.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

VICE-PRESIDENT, DR. H. LENOX HODGE, in the chair.

THURSDAY EVENING, OCT. 22, 1874.

TUBERCULOSIS of the kidney—Peculiar "worm-like" bodies from the urine of the same case.

Dr. R. M. BERTOLET presented the specimens for Dr. THOMAS B. REED, who gave the following history:

"The pathological specimens just shown are from a patient of mine, A. B., aged 35, of American parentage, who came under my professional care some ten days ago, with an acute attack of nephritis. Always of comparatively robust health (father still living at sixty, mother died of some acute fever, one sister of acute tuberculosis of the lungs at an early age), having served throughout the war, he came first under my notice professionally in 1869, and was treated for several months for 'stricture of urethra' (the result of gonorrhœa contracted in 1864, in the army) by gradual dilatation, from the finest 'catgut' to a No. 19 bougie. Every four to six months since (1869 to 1874), I have passed a bougie, and I repeated the operation some six weeks before his death. He was a man in mercantile life, whose business required him to travel a great deal; of correct and temperate habits, and, so far as I know, never sick until his last illness.

"When called to see him, October 9, he was suffering from fever of a malarial type, from a severe cold which he had neglected, and from wandering neuralgic pains over the chest and abdomen, and severe local pain over the kidneys. He was promptly treated by a mercurial cathartic, active local counter-irritation, dry cups, etc., over the lumbar region, full doses of quinine, and moderate diuretics, and for thirty hours he seemed decidedly improved. The urine was highly albuminous, sp. grav. 1.130, but there was no apparent deposit until the 12th. On this day was observed an acute pleurisy developed posteriorly over both lower lobes of the lungs, more decided on the left side, and large effusion into the chest, which was greater on the right, with consequent oppressed breathing, and the tough, viscid expectoration specially characteristic of this complication. Simultaneously were noted a *peculiar blanching of the face* and a *failure of the circulation*, indicative of *hemorrhage*, and *most alarming*. This was late on the evening of the 12th. On examining his urinal on the morning of the 13th, very large quantities of cylindrical worm-like bodies, about one to two lines in diameter and from two and a half to three and a half inches in length, were discovered in the peculiar, smoky, dusky-red urine, which showed to the eye (as was soon confirmed by the microscope) positive and extensive hemorrhage from the urinary organs. He continued to pass these bodies in greater or less quantity during the remaining forty-eight hours of life. No treatment was of the slightest avail. He was freely stimulated with tonics and astringents, active diuretics and diluents, thorough counter-irritation, cups, etc. He died of exhaustion (loss of blood and compression of lungs) on the evening of the 15th. His mental condition was clear till within a few moments of

his death. Relief by the aspirator would have been tried had there been the slightest probability of averting the result.

"The post-mortem examination was made twenty-four hours after death, and was confined to the thoracic and abdominal organs. There were large effusions into the pleural cavities, with pleuritic exudations over lower lobes of both lungs, greater over the left. No evidence of tubercle in lungs. Liver apparently healthy; dark blood escaped from portal veins upon section. Mesenteric glands not enlarged. The bladder was contracted and empty; its mucous membrane and that of the right and lower half of left ureter presented no pathological lesions.

"*Left kidney* moderately enlarged, of doughy consistence; its cortex smooth, yellowish-white in color, with clearly developed *stellulæ Verheyneii* and injection of the Malpighian bodies,—the latter seen as red dots; nearly all of the medullary papillæ intensely congested, purplish in hue. Pelvis and ureter healthy. The thin capsule easily separated, and was covered with a stout layer of adipose tissue.

"*Right kidney* somewhat larger and more congested, with the same alterations of the parenchymatous structure as noted in the opposite organ. But in addition there are seen disseminated at numerous points both in the cortical and medullary substances, also in the capsule itself, small round tubercular nodules of variable size and color. None of these tubercles have attained a size greater than that of a small shot, the larger ones having an opaque, yellowish aspect, while the smaller are gray and transparent.

"The mucous lining of the pelvis is thickly strewn with granules, many of which have softened into continuous cheesy patches, forming large, irregularly-shaped ulcerations. The underlying connective tissue is greatly hypertrophied. There is extensive loss of substance of several of the central papillæ, the tubercular infiltration and ulceration extending upwards into the cortex.

"The upper half of the left ureter is apparently filled with a clot half an inch thick. The mucous membrane of this portion of the tube is studded with minute gray tubercles. A more careful examination clearly shows that the clot has been formed not within the lumen of the tube, but by extravasations between the mucous membrane and the outer coats of the ureter.

"Microscopically, both kidneys presented fatty degeneration of the renal epithelium, with slight hyperplasia of the interstitial connective tissue. The presence of giant multinuclear cells and lymphadenoid structure in the gray granules of the left kidney confirms the diagnosis of true miliary tubercle.

"The softened cheesy foci (probably embolic) situated in the cortex, although only of the size of a bullet, evidently proved the source for the local infection, since the bladder and genito-urinary organs were not, as is usually the case in renal phthisis, involved in this instance.

Remarks.—"The right kidney clearly showed erosion of some of the vessels of the kidney, with subsequent hemorrhage and rupture of wall and the pouring out and infiltration of the fatty and cellular tissue surrounding the pelvis of the kidney and ureter, forming a large, irregular mass which at first sight suggested the idea of malignant disease of the organ. When the kidney was lifted from its bed, a large mass of coagulated blood was found lying in the retro-peritoneal region, amounting to several handfuls. Here, then, was the cause of the blanched face and failing circulation. From the eroded arteries and ruptured wall of the kidney his life-blood had slowly and silently ebbed away.

"Some of the questions involved in the treatment and subsequent post-mortem examination of this case are of interest.

"The hemorrhage and its cause are of special moment.

"(1) Malignant disease (cancer) or traumatic injuries are the chief sources of hemorrhage from the kidneys. During life, and, indeed, until the determination of the question by the microscope, I was of the opinion that malignant disease (cancer) had suddenly been developed in this case. Tubercle in other organs—the lungs, for example—is not, as a rule, attended with hemorrhage, but, as in gangrene, seals up the vessels as it advances; and in looking up the authorities on the subject I do not find any mention made of hemorrhage as an element in any discussion of the subject of tuberculosis of the kidney.

"(2) The presence of the cylindrical worm-like bodies, which were probably composed wholly of blood-corpuscles and fibrin, and the probable manner of their formation. There were three possible modes thought of. Aitken and Vogel state that 'they have been seen, and are possibly formed by the passage of blood through the urethra.' This, if it was passed slowly and through a stricture, might be a satisfactory explanation; but in this case no stricture existed, as a No. 19 bougie had been passed within a few weeks of death, and the passage of these bodies in great numbers at each act of micturition shows conclusively that they were formed before reaching the bladder.

"Niemeyer, another author who mentions the subject, says 'that they are sometimes formed in the ureters,' but fails to state under what circumstances.

"In the case before us this seems to me the most intelligent way to account for their formation. As stated in the post-mortem account, the hemorrhage which was poured out into the fatty and cellular tissue in and around the pelvis and the origin of the ureter *coagulated and formed a semi-solid mass encircling the ureter and very greatly contracting its calibre*, so that while surrounded by this mass *only a small-sized probe could be passed*. The blood poured out in the pelvis of the kidney made its way with difficulty and drop by drop through the stricture, and coagulated in the ureter below this point.

"The third theory to account for their formation is in the straight or collecting tubules of the kidney. The masses seem to me too large to be accounted for in this way; and yet the microscopic appearances of some of the specimens of Dr. Bertolet show what seem to be the branching tubules coming off from the straight tubules.

"To his very able assistance in the post-mortem and microscopical investigation of this case, as well as in the discussion of the various theories and authorities on the subject, very much of the interest of the case is due."

Examination of urine and worm-like bodies by Dr. Bertolet.—"The urine had a specific gravity of 1030, an acid reaction, highly albuminous, contained granular and blood casts, free blood-corpuscles, besides the numerous worm-like bodies seen floating in the reddish-brown-colored fluid. These worm-like bodies are more or less tortuous in outline and dark red in appearance. Their average length is two inches, width one line and under. Very many of them end in a thin filamentous appendage, so tenuous as to be scarcely visible to the naked eye. A few of these terminal extremities, when examined microscopically, present a dichotomous appearance. These lateral branches are not due to any accidental folding, but seem to be in actual continuity with the main trunk.

"Microscopically, these casts are made up of coagulated fibrin and blood-corpuscles. Renal epithelium is seen adherent at points along the minuter filaments only. The question at once arises, At what point were these remarkable casts formed? While the wider portions of them were unquestionably moulded in the constricted part of the ureter, the terminal parts are most probably casts of dilated straight tubules.

"The adherent renal epithelium, the branched appear-

ance, and the fact that sections of the medullary cones still reveal the presence of blood-casts in some of the tubules, while others are seen empty and deprived of their epithelium, lead me to regard the tail-like end attached to some of these worm-like bodies as being formed in the uriniferous tubules. That they should have been washed from thence and become adherent to the masses, plugging the ureter, seems to me no more improbable than that the clots should have been expelled from the latter site. Beale and other authorities state the diameters of the largest tube-casts to be from one five-hundredth to one two-hundred-and-fiftieth of an inch. Yet, upon considering the unusual and enormous pressure to which the uriniferous tubules of this kidney must have been undoubtedly subjected by the blood damming up into them, I believe that the finer portions at least of these worm-like bodies were formed in the straight tubules, and not in the ureter."

Dr. H. LENOX HODGE inquired how soon the patient died after the passage of the worm-like bodies.

Dr. REED replied that they were passed on Tuesday morning, and the patient died on Thursday.

Dr. HODGE inquired whether there was hemorrhage into any other organ.

Dr. REED thought the death of the man was owing to a large hemorrhage about the kidney, behind the peritoneum, in connection with the acute pleurisy with which he was suffering. There was no hemorrhage in any other organ.

Dr. J. G. RICHARDSON observed that to his eye the so-called "branch" of the cast shown by Dr. Bertolet presented the appearance of being a narrow strip of the main stem, split or torn off the side for a short distance, instead of showing the characters of a smaller cast from the lumen of some tributary tubule emptying into the larger stricture.

He further remarked that he had never seen a tube-cast larger in diameter than the one three-hundredth of an inch, and that the largest recorded by Beale was the one two-hundred-and-fiftieth of an inch; whereas the bodies presented by Dr. Bertolet were, when fresh, as thick as the one-sixth of an inch. He also thought that so large a dilatation of the uriniferous tubules as would be necessary for the formation of these bodies would be visible after death. Dr. R. suggested that the bodies might be formed in the ureter, whose walls are often in contact, and that the tapering form of the body might be owing to the fact that the farther from the immediate seat of hemorrhage the less would be the force of the blood and the smaller its quantity, so that a clot would gradually become narrower in its diameter as its extremity was reached.

Dr. MORRIS LONGSTRETH inquired whether blood was observed in the uriniferous tubules under the microscope.

Dr. BERTOLET replied that numerous sections had been made, and in some of the tubules blood-cylinders were still found.

Dr. RICHARDSON thought that blood extravasated into the pelvis of the kidney might force its way into the tubules.

The specimens were referred to the Committee on Morbid Growths, for further examination and report.

Two cases of intestinal perforation, the sequelæ of typhoid fever.

Dr. F. P. HENRY presented the specimens,—perforation of the ileum consequent upon ulceration of Peyer's patches. Both of the subjects furnishing these specimens were walking cases of typhoid fever. The first case, from which the specimen in alcohol was obtained, was admitted to the Episcopal Hospital on the 9th of May, and died on the 5th of June. For the first four days after admission he remained in bed, but during the greater part of his stay of nearly a month in the

hospital he was up the most of each day. He was easily fatigued, however, and subject to headache and dizziness. This latter symptom, dizziness, was his chief complaint, and, taken in connection with his slow pulse, anorexia, and frequent headache, was calculated to draw attention to the brain as the seat of disease. This dizziness was so great as to cause him to adopt a peculiar gait to steady himself. Dr. H. noticed him one day walking with his legs very wide apart, and on questioning him found that it was to prevent himself from falling. His temperature was found so near normal that no record of it was preserved until June 1, when the doctor observed it recorded as 101°; this being the evening temperature.

On June 2, the morning temperature was 99°, and the evening, 100½°.

On June 3, morning, 98½°; evening, 100°.

June 4.—Morning, 99½°; evening, 104½°. It was at this time that symptoms of peritonitis showed themselves. There was enormous tympanitic distention and great tenderness of the abdomen, with a pulse of 140. The pulse was taken again during the night, and found to be 105½°.

The man died before morning, in a state of collapse, the result of shock. At the post-mortem, a few hours after death, there was found a small quantity of watery fæces in the abdomen, and a few patches of opacity, with increased vascularity, upon the peritoneum covering the small intestines. The ileum was thickly covered with ulcerated Peyer's patches, and after careful search a small perforation was discovered at the bottom of one of these ulcerations, a few inches above the ileo-cæcal valve.

This patient was kept upon liquid diet, as a strong suspicion of typhoid fever existed, and the ulceration cannot, therefore, be considered due to a traumatic cause.

The second case was admitted to the Episcopal Hospital on the 12th of October, 1874. He had been ill for five weeks previous, but had not been confined to bed. His symptoms were headache and fever, always worse towards evening; pain in the right iliac region, and diarrhœa, amounting to from fifteen to twenty stools in the twenty-four hours. Six days before admission to the hospital, he was suddenly seized with nausea and vomiting, the diarrhœa continuing, with pain accompanying each passage.

On admission, there was excessive tenderness over the whole abdomen, great rigidity of the abdominal muscles, particularly the recti, and vomiting at frequent intervals of a small quantity of pale-green fluid, apparently mucus, tinged with bile.

Dr. H. first saw the patient on the 13th, the morning after his admission, and found the above-mentioned symptoms. The decubitus was dorsal, with the thighs and legs flexed. The pupils were moderately contracted; respirations eighteen per minute and very shallow; pulse 160, weak and thready; skin cool and moist.

The treatment followed by Dr. Steele, the resident physician, had consisted of a grain of opium, in pill, every three hours, with a hypodermic injection of one-quarter of a grain of morphia every six hours, with nutritious enemata.

Dr. H. administered one-quarter of a grain of morphia hypodermically, and on leaving the hospital found the respirations sixteen per minute, and the pulse still 160.

At 1 P.M. there was no pulse at the wrist, the respirations were fourteen per minute, and the pupils decidedly contracted. Died at 9 P.M.

The opium administered did not produce sleep or stupor, but served to mitigate the severity of the pain.

At the autopsy, eleven hours after death, the intestines were found matted together in one mass by, and bathed in, about two quarts of very offensive pus. Mesenteric

glands enlarged but not softened. Several ulcerated Peyer's patches were observed, but the ulceration was by no means so extensive as in the preceding case. At the bottom of one of these patches were found two rather large perforations, and a third at the bottom of a second ulcer. In these ulcerations the whole of the glandular structure has sloughed away, leaving a clean-cut ulcer, showing a late stage of the disease. The intestines are covered with a thick layer of lymph.

The notes and observations in connection with these cases were by Drs. Steele and Reid.

Fluid removed from a cyst of the broad ligament.

Dr. H. LENOX HODGE presented the specimen, from a woman 52 years of age, who had suffered from the swelling for four years. On October 9, Dr. H. tapped her, and removed ten quarts of this colorless, transparent, thin fluid. It is slightly opalescent, and looks like pure spring-water. Its specific gravity is 1004, and it does not coagulate on boiling. Upon standing it has become less clear than at first, and a thin pedicle has formed upon its surface. Under the microscope, Dr. Richardson reports that the field is free from objects.

There is a property which Dr. H. thought this thin fluid possessed, and to this he wished to direct the attention of members of the Society, namely, *its power of transmitting sound*. Upon auscultating the abdomen of this patient, the gurgling of the intestines could be distinctly heard in front where the sound on percussion was dull. In other cystic dropsies of the abdomen he had not noticed this symptom. It may possibly prove of value in detecting the existence of cysts of the broad ligament and in distinguishing them from other collections of fluid. Their diagnosis prior to tapping is somewhat difficult, and anything that will aid in recognizing them is of value.

REVIEWS AND BOOK NOTICES.

INFANT DIET. By A. JACOBI, M.D. Revised, enlarged, and adapted to popular use, by MARY PUTNAM JACOBI, M.D. G. P. Putnam's Sons, N.Y.

The peculiar combination of authorship in this little work gives one an exceptional interest in its perusal. Surely, if ever woman falls as a practitioner into her appropriate place, it will be as a director of infant management and an adviser of the mothers of our race.

A proper diet for infants deprived of the breast would save, in our large cities, more lives than an infallible specific for pulmonary consumption. While the world is filled with so-called infant foods, from that of the great Liebig to that of the small apothecary who seeks fame and fortune at the infant's mouth, the recipients, with singular unanimity, condemn them all in unmistakable pantomime, too often ending in tragedy, the baby actor falling at last before the well-directed blows of even the most highly respectable articles. Yet how seductive the allurements! how voluminous the catalogue! how highly recommended each unfailling substitute for that fountain which seems destined never to admit a rival! Ingenuity has given us not only the names, but, with a gush of generosity, the articles known as farina, maizena, cerelina, papoma, nutrina, prepared wheat, barley, malt, oatmeal, corn starch, and so on to the end of the catalogue. Yet, in the very midst of this gushing plenty, the summer months sweep away their victims, and the rest of the year gleans the plenteous fields.

Though advocating the claims of no new aspiring food, this book aims rather at a sensible use of what means we have, and will prove suggestive to many practitioners, and one that can be recommended to

intelligent mothers. We do not intend in our brief notice to discuss the propriety or value of all its recommendations, but only say, Find us a work of the size and kind better, or as good.

With as little technicality as is consistent with an honest treatment of the subject, the language never descends to that mock simplicity which is the bane of so many works "adapted to popular use." We are sure that if popular medical works must be written, the true principle in their composition is that set forth by the authors of this one in their preface,—that science will not bear too much dilution, and that even non-professional readers, even the mothers who may read this book, have some brains, as a rule, and resent being addressed, as they so often are, in what may be called medical baby-talk. E. W. W.

CLINICAL LECTURES ON VARIOUS IMPORTANT DISEASES.

BEING A COLLECTION OF THE CLINICAL LECTURES DELIVERED IN THE WARDS OF MERCY HOSPITAL, CHICAGO. By NATHAN S. DAVIS, A.M., M.D., Professor of Principles and Practice of Medicine and Clinical Medicine in Chicago Medical College. Edited by FRANK H. DAVIS, M.D. Second Edition. Philadelphia, Henry C. Lea, 1874. Pp. 283.

This effort to instruct the profession from the numerous cases of disease treated in Mercy Hospital is certainly a meritorious one, and the records so carefully compiled by the younger Dr. Davis doubtless contain many observations which, if they had been published in the year of our Lord 1800, would have possessed great value.

During the current century, however, sundry wonderful discoveries in the branches of pathology, diagnosis, and therapeutics have been made, so that at the present day scientific physicians, even of "the younger class" (for which, the preface tells us, this book was especially designed), are apt, at least in this longitude, to demand that recent medical works should enable them to learn something not fully set forth in the pages of Sydenham and Cullen.

Our space is too limited to permit us to point out to the Doctors Davis, for their own benefit as well as that of their *students* and *patients*, many of the improvements in the healing art of which they appear to be practically ignorant. As an aid to diagnosis and prognosis, we would, however, recommend to their notice an ingenious instrument called the clinical thermometer, whose precise indications of temperature far exceed in value those expressed by the inexact phrases "skin cool" (p. 167), "skin dry but not hot" (p. 29), "skin dry and warmer than natural" (p. 27), etc., etc. Conscience forbids us to conceal any longer from Prof. Davis that a modified form of the antique magnifying-glass (with which he is doubtless familiar) might, by revealing those remarkable microscopic cylinders denominated tube-casts, add much to the certainty of his diagnosis of Bright's disease, for which he now ("1874") seems to depend solely on the history, the general symptoms, and the presence of albumen in the scanty urine (p. 171). We further feel it a duty to inform our authors that a certain Prof. Niemeyer has pointed out some broad distinctions between tuberculosis and phthisis, which throw important light upon the diagnosis and treatment of these affections. And lastly, we beg leave, out of pity to the poor sufferers from neuralgia now lying in Mercy (?) Hospital, to suggest that the "temporary relief" should sometimes be afforded them *at once*, by that precious boon to humanity, the hypodermic syringe, instead of forcing them to wait hours for a partial mitigation of their agony by the ancient, tardy, and inefficient methods of using "anodyne liniments" (p. 190), or calomel and opium (p. 205). R.

GLEANINGS FROM OUR EXCHANGES.

PYÆMIA (*The Lancet*, November 14, 1874).—Dr. W. Moxon believes that, after a survey of the indications of its morbid anatomy, he must regard pyæmia as made up of blood-disease and local inflammations. We can trace several ways in which the blood-disease and local inflammations are related to each other.

First. The general disease may greatly predominate, so that the blood becomes unviable, and death occurs with signs of blood-poisoning, revealed during life in the form of high fever and rapid fatal exhaustion, and after death by softening of the great viscera and extravasations of blood and ecchymoses within the tissues, no local suppurations being found.

Also, here we must remember that some cases of pyæmia of a most characteristic kind are found without any kind of sore whatever; we should not say this so strongly unless we had, in several instances, searched with the utmost care through all parts of the body and found no primary disease.

Secondly. In another kind of pyæmia the wound or sore produces a morbid matter, which is absorbed, and so poisons the blood. It is probable that the pyrexia of surgical fever is principally caused by the absorption of the products of the wound; so that this kind of pyæmia is allied to common surgical fever. The prevention of putrefactive changes in the discharges of the wounds averts the danger of pyæmia from this cause; and the success of the antiseptic method shows sufficiently the importance of this source of blood-poisoning. It creates, however, only one kind of pyæmia, characterized by its appearing later, and running a more chronic course, with secondary suppurations.

It is believed by some that there is a pyæmic *contagium*, which acts first upon the wound, and enters the system there; but further observations are required to substantiate this hypothesis.

Thirdly. In some cases that go by the general name pyæmia, the whole affection is confined to the formation of purulent thrombi in the veins, and the conveyance of these to the lungs as emboli, where they set up secondary suppurations. Such a process is too simple and clear to need further remark.

These views may be thus summed up: Simple embolism, or purulent absorption, or general fever due to contagion, severally form distinct varieties of what is called pyæmia; but in many cases, perhaps the majority, all these conditions exist together.

PHOSPHORUS AS A STIMULANT (*The Lancet*, October 31, 1874).—Dr. John Brunton records the two following cases of the use of phosphorus as a stimulant:

A woman, aged 47, was in the twelfth day of typhus fever. Her depression was very great. She lay in bed cold, nearly pulseless, semi-unconscious, and with difficulty aroused, quite unable to move in bed; in short, she appeared moribund. One-twelfth of a grain of phosphorus was administered every two hours, with marvellous effect. The revivifying power was very marked, by return of heat, pulse, consciousness, and general power. Next day she had the turn, and has recovered admirably.

A man, aged 40, suffered from diarrhæa, which was very prevalent. In a day or two he had the appearance of having something more than mere diarrhæa. He became too ill to get out, and took to his bed. On examination, the characteristic rose-colored spots of typhoid fever were found, and he had all the other symptoms present. His fever continued gradually to increase; his conjunctivæ were injected, his breath cold, his skin cold and clammy; pulse 48, very weak and compressible; voice whispering; temperature 96.4°. He was

in a condition of extreme depression. Phosphorus was at once administered in doses of one-twelfth of a grain every two hours, and eighteen hours after, when he had taken three-quarters of a grain of the drug, he had quite revived. His skin was comfortably warm, eyes not so suffused, voice more natural; pulse 72; temperature 99°. The phosphorus was immediately stopped, and nitric acid was given. Since that he has gone on prosperously, and is now convalescent.

The formulæ used was—

R Ether. tinct. phos. (gr. $\frac{1}{2}$ to $\frac{3}{4}$), $\frac{3}{4}$ iii;
Spt. vin. rect., $\frac{3}{4}$ ss;
Glycerin. anhydr., ad $\frac{3}{4}$ iiss.

One teaspoonful as a dose.

SYMPHYSEOTOMY (*The Boston Medical and Surgical Journal*, November 26, 1874).—Dr. Piccinini, after a review of the operation of symphyseotomy, lays down the following rules:

1. Never perform symphyseotomy when the pelvis is contracted to less than three or three and one-half inches (80 to 95 millimetres).
2. Operate by the subcutaneous method.
3. After section of the cartilage, apply the forceps.
4. The position of the patient, on her back with a hard cushion beneath the pelvis, previous catheterization, and an immovable bandage are details of great importance to the success of the operation.

During five years there have been nineteen operations at the hospital at Naples, in fifteen of which the women were saved, and in sixteen the children.

NOTES AND QUERIES.

EXTRACTS FROM DR. ERICHSEN'S ADDRESS ON AMERICAN SURGERY.

"And first, as to the Profession, I may at once say that it appears to me to occupy in America, relatively to the rest of the community, a far higher social status than it does in this country. The reason for this seems tolerably obvious. In the absence of an exalted hierarchy in an established church and of great dignitaries of the law, these professions do not offer sufficient inducement for men of the highest intellectual calibre to enter them. Medicine therefore stands prominent as probably the best-educated, certainly the most scientific, and consequently, in a country where education is so widely diffused and so much regarded, the most respected, of the professions. And in the absence of all titled classes, it can socially more than hold its own in competition with the trading and financial elements which are such prominent constituents of the society of most of the American cities. Perhaps, also, the high position that medicine occupies is owing, in some respect, to the greater uniformity of practice that prevails among medical men in America than with us. For, just as in the Law there is no division into barristers and solicitors, so in Medicine there is none into physicians, surgeons, and general practitioners. Special aptitude, inclination, or opportunity will necessarily lead men to a greater eminence in particular departments of the profession. But the subdivision into classes and specialties, which is so prevalent here, is unknown in the United States.

"Surgery in the United States certainly stands at a very high level of excellence. The hospital surgeons throughout the country have struck me as being alike practical, progressive, and learned in a very high degree. In practical skill, and aptitude for mechanical appliances of all kinds, they are certainly excelled by no class of practitioners in any country. They are thoroughly up to modern surgery in its most progressive forms, and I have never met with any class of men who are so well read and so perfectly acquainted with all that is done in their profession outside their own country. It would be a great injustice to American surgeons for it to be supposed that surgical skill is confined to the large cities or to the few. On the contrary, I know no country in which, so far as it is possible to judge from contemporary medical literature, there is so widely diffused a high standard of operative skill as in the country districts and more remote provinces of the United States. The bent of the mind of the American surgeon is, like ours, practical rather than scientific; in fact, there are the same mental characteristics displayed in him that we find here,—the same

self-reliance, the same practical aptitude, the same *curative* instinct, which leads him to consider his patient rather as a human being to be rescued from the effects of disease or injury than as a scientific object to be studied for the advance of professional knowledge.

"One of the great advantages—and it is a very great one—that an English writer enjoys is that he addresses eighty millions of people, and that his works are not only disseminated throughout his own country, but, if of any value or importance, are eagerly sought after by that still larger body of readers existing in the 'Greater Britain' which now encircles the globe. And if it be true, as has been said, that the judgment of enlightened foreign contemporaries is an anticipation of that which posterity will give, he may possibly have a foreshadowing of the verdict that a future generation of his own countrymen will pass upon him, in the estimate in which he is now held among those who inhabit the regions beyond the Atlantic.

"Surgical practice in America does not differ in any very essential respects from that adopted here. There are necessarily some modifications, and many ingenious appliances; but essentially there is no greater difference between American and English surgery generally than is to be found between the practice adopted in any two London hospitals.

"The treatment of wounds is sufficiently simple, and presents nothing peculiar. I observe that American surgeons are careful about the drainage of wounds, and employ drainage tubes or similar appliances freely.

"Antiseptics' do not appear to be much, if at all, employed; at least, in a methodical form. Carbolic acid in the form of lotion or wash is commonly used. Indeed, antiseptics are not so much needed in the American hospitals as in ours. The object of antiseptics is to prevent the contamination of a wound by septic impurities from without. These sources of contamination do not exist in such hospitals as those that I have been describing to the same extent that they do in less perfectly constructed and less hygienically conducted establishments, and hence antiseptics are proportionately less needed. In America it is attempted to accomplish by improved construction of hospitals, and by close attention to hygienic requirements, those great results which we are here driven to attain by 'antiseptic' methods of treatment. In consequence of the ignorance in all matters that relate to the hygiene of hospitals that prevails among the architects and managers of these institutions, an undue burden of anxiety, responsibility, and care is thrown upon the surgeon, who is now unceasingly engaged in combating septic disease; and in order to keep down that rate of mortality which is the direct consequence of septic hospital influences, he is driven to the employment of elaborate and complicated methods of antiseptic treatment. Cleanliness in its broadest sense is the best and most efficient antiseptic. If the constructors and conductors of hospitals were acquainted with or would adopt those hygienic rules on which hospitals should be built and managed, if hospitals were not overcrowded, if the system of ventilation was perfect, if there was a continuous water-supply, a proper isolation of wards and distribution of patients, the causes of septic diseases would not be generated. Those foul and filthy-begotten diseases, pyæmia and hospital gangrene, would disappear, and antiseptics, in the absence of septic influences, would become unnecessary. Contamination of hospital air would be prevented; we should not, as now under defective hygienic arrangements, first allow the pollution to take place, and then be driven to the use of antiseptics in order to prevent infection of wounds by the already septic-laden atmosphere. Under the present system we begin at the wrong end. Instead of preventing the possibility of atmospheric contamination by perfect hospital hygiene, we allow the septic poison to be engendered, and then, before it can be implanted on the wound, seek to destroy it by the employment of chemical agents.

"With regard to anæsthetics, I have little to say. Ether is invariably used at Boston, and is preferred to chloroform by many hospital-surgeons in other American cities. I saw it given in some operation cases at the Massachusetts General Hospital, which has the great honor and privilege of being the institution in which anæsthesia was first employed in any surgical operation; it was administered here on a sponge, without any apparatus or complicated contrivance.

"Except in Boston, the Museums are still in an undeveloped condition. That of Dr. Mott, at New York, was unfortunately destroyed by fire; but Dr. Wood, with characteristic energy, is trying to establish one at Bellevue. At Philadelphia the splendid collection of Hyrtl's injections have lately been acquired by purchase. But there is one museum which is so unique, so admirably arranged, and so interesting that I must direct your attention to it for a few minutes. It is the Museum of the Army Medical Department at Washington. This magnificent collection, illustrating not only every possible variety of gunshot and arrow injury, but also those diseases which are more fatal than the bullet to an army in the field or in camp, has, under the able superintendence of Surgeon-General Barnes and of Drs. Otis and Woodward, been most admirably arranged

and catalogued. The collection itself is well known in Europe through the medium of those beautifully illustrated and ably collated medical histories of the great War of the Rebellion which have been published under the superintendence of the Medical Department of the United States Army. Many of the specimens in this museum are quite unique."

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Having endured much fruitless discussion as to whether specialties are really a necessity of medical centres, and, if so, why so, I was greatly delighted to learn, from a communication in a late issue, that the necessity "occurs as the result of an organization in man which leads him to take cognizance of results as evidences are presented to him in the practical working of things."

We need, now, no more discussion of the subject: it may be considered definitely and finally settled by this lucid exposition.

Yours, gratefully,
D. S. M.

CAMP McDERMIT, NEVADA, November 25, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Will you be good enough to inform me, through your valuable journal, of the extent of Mr. Durham's researches with regard to the condition of the brain in sleep, and when and where they were published?

I infer from the report of a meeting of the Royal Medical and Chirurgical Society, published in the *London Medical Times and Gazette* for October 24, 1874, p. 486, that Mr. Durham has advanced the theory that "narcotics" produce contraction of the blood-vessels. Eight months ago my preceptor, Prof. Eliot, of the District of Columbia, suggested to me the same theory as original, with a view to have it demonstrated, since which time the subject has engaged my attention and study.

Respectfully,

GEORGE M. KOBER,
A. A. Surg., U.S.A.

MARRIED.

November 12, at Maple Hill, Montgomery County, by Friends' ceremony, Miss FRANCES STOCKTON CORSON, daughter of Dr. Hiram Corson, to RICHARD H. DAY, of Philadelphia.

At Fort Bridger, Wyoming Territory, Miss ADA CARTER, daughter of Judge William A. Carter, to JOSEPH K. CORSON, Assistant-Surgeon, U.S.A., son of Dr. Hiram Corson, of Montgomery County, Pennsylvania.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting of the Philadelphia County Medical Society will be held Wednesday, December 23, at 8 o'clock P.M.

Dr. J. M. Boissonnet will read a paper entitled "A Case of Purpura Hæmorrhagica requiring Transfusion."

All regular practitioners in the city are invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 8 TO DECEMBER 14, 1874, INCLUSIVE.

SMITH, J. R., SURGEON.—Granted leave of absence for fifteen days. S. O. 242, Military Division of the Atlantic, December 9, 1874.

KINSMAN, J. H., ASSISTANT-SURGEON.—Granted leave of absence for nineteen days. S. O. 270, Department of Dakota, December 8, 1874.

MATTHEWS, W., ASSISTANT-SURGEON.—Assigned to duty at Fort Wood, New York Harbor, as Post-Surgeon. S. O. 241, Military Division of the Atlantic, Dec. 7, 1874.

BROWN, P. R., ASSISTANT-SURGEON.—Assigned to duty at Fort Hamilton, New York Harbor. S. O. 241, c. s., Military Division of the Atlantic.

FINLEY, J. A., ASSISTANT-SURGEON.—Assigned to duty at Fort Monroe, Va. S. O. 241, c. s., Military Division of the Atlantic.

BEDAL, S. S., ASSISTANT-SURGEON.—Assigned to duty at Fort Wadsworth, New York Harbor. S. O. 241, c. s., Military Division of the Atlantic.

WILCOX, T. E., ASSISTANT-SURGEON.—Assigned to duty at Fort Leavenworth, Kansas. S. O. 201, Department of the Missouri, December 4, 1874.

SATURDAY, DECEMBER 26, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON SCABIES.

Abstract of a Lecture delivered at the Hospital of the University of Pennsylvania

BY LOUIS A. DUHRING, M.D.

Reported by ARTHUR VAN HARLINGEN, M.D.

GENTLEMEN,—Before examining this patient we will obtain from him a few facts relative to the beginning of the complaint from which he suffers, and also some account of its course. He is an Englishman, healthy, and has never had any disease of the skin previous to that for which he now seeks relief.

When he landed in New York, six months ago, he was, to the best of his knowledge, perfectly well. He spent two nights in a boarding-house in that city, and then came to Philadelphia. Three weeks after his arrival here he first noticed an eruption on the left fore-arm, characterized by itching. This spread gradually from one point to another until pretty much the entire body, with the exception of the face, palms of the hands, and soles of the feet, became involved. Lately the itching has been so severe as to keep him awake all night: indeed, he tells us he is often obliged to stupefy himself with liquor in order to gain a night's rest.

Such are the facts in the history of the case. Now, proceeding to examine our patient, we first observe that the disease is a chronic one. We do not need the history to acquaint us with this fact; any one who has had much experience in this class of cases would immediately perceive the disease to be non-acute. This patch, for instance, can easily be known to have existed some time. We have here numerous old scratch-marks, the result of long and habitual use of the nails. Let me remind you just here that the presence or absence of the evidences of scratching should always claim your attention in the examination of diseases of the skin. Such evidences will decide at once whether the affection under consideration belongs to the class of itching or non-itching diseases. The case before us evidently belongs to the former; even such remote parts of the body as the integument covering the angles of the scapulæ, which are quite difficult to reach, have been attained by long practice on the part of our patient.

As to the localities affected, you will observe that though the disease extends pretty much over the entire body, yet there are certain parts where the process seems to have been more active, as evinced by the greater number of scratch-marks. The regions about the axillæ, for instance, have been very much scratched. Some of these marks are quite florid,—they are recent; others are darker and older. About the nates the disease appears to have been particularly troublesome. We notice here that the corium has become considerably thickened, and many large pustules are scattered over it.

Along the thighs also the scratch-marks are very numerous, and the skin is sprinkled over with crusts, not of dried pus, however, but of blood. We have here, also, broken hairs and torn follicles, from each of which a drop of blood has oozed.

All these appearances result from the scratching; and I dwell upon these marks because they play an important part in the history of the case. Before leaving this point, observe that the inside of each thigh presents the disease in a still more marked form. We have here pustules, scales, pigment-spots, and patches of infiltration, which will endure some time after all active symptoms of the disease have disappeared.

Taking a general view of the case as the patient stands before us, notice the peculiar arrangement of the eruption: plentiful in the axillæ and on the buttocks and abdomen, less so on other parts of the body, notably the sternum. On the palms of the hands and soles of the feet, as well as on the face, absolutely no trace of the affection can be discerned.

The differential diagnosis of the case lies between two diseases: simple eczema, and scabies or "the itch." These two affections are the only ones likely to assume the appearances here presented. Remember that when I speak of scabies as "the itch," it is not merely an itching disease to which I allude, but one of a parasitic nature, dependent upon the irritation and inflammation produced by an insect, the *acarus scabiei*.

A single point shows us almost certainly which of these two diseases we have before us, and that is the arrangement of the eruption. On the one hand, we have it more marked over the axillæ, abdomen, buttocks, and thighs,—all parts of the body well protected with clothing. On the other hand, the eruption is very scanty over the sternum, and does not exist at all on the face, palms, and soles, all of which are localities either greatly exposed to external influences, or which, from their structure, are unfavorable to the morbid process.

In short, the eruption affects those parts of the body best suited to the unhindered development of the itch-insect, and we have before us a case of scabies. Were this eczema, we would have the eruption more irregularly distributed; eczema has no places of election. The diseases in appearance, however, resemble each other closely, and in fact the result of the irritation of the itch-insect is eczema of one form or another; but it is a result, and not the primary lesion. Cases of eczema papulosum are often mistaken for scabies, and the patients reported cured by internal treatment, etc.

The only reliable diagnosis, after all, is based upon the presence or absence of the itch-insect itself, the *acarus scabiei*, which must be carefully sought for in such parts of the skin as it is most likely to be found in. One of these localities is the hand, and particularly the skin on the inside of the fingers. At this point the burrows in which the *acarus* lies are less likely to be torn open, and may also be seen more distinctly than elsewhere. When patients work in strong alkalies, acids, or the like, these

burrows become destroyed, and are then very frequently not found or are altogether absent.

The burrows of the itch-mite are worthy of careful study. They are produced by the insect finding its way under the epidermis and then making a canal or passage which is seen upon the surface as an elevated line or ridge about a quarter of an inch long, usually dark-colored or black, owing to accumulations of dirt and foreign substances which are apt to collect upon the hands.

The burrows are about half a line in width, and vary in length; sometimes they are but a line or two, in other cases they are as much as half an inch long. They are found in greatest number, perhaps several or more, upon the insides of the fingers near the hand, where the skin is thinnest. Here the mites make their habitat, and are apt to remain undisturbed until they have deposited their eggs, when they are known to die in their burrows.

There are very few entire burrows on this man's hands, owing to the fact that the disease is chronic, and the long-continued scratching and tearing to which the skin has been subjected has caused them to become rubbed down, broken, torn, and scraped off, and finally, to a great degree, obliterated. Still, there are some left, and by carefully searching these the insect may be detected and picked out. We need not expect to find a dozen in this hand; we shall be fortunate if we find two or three.

In order to obtain the acarus, we take a needle, and, opening the closed end of the burrow, which is indicated by a black dot, and which is the point where the insect lies, we may be able, if dexterous, to lift it out upon the needle-point. The operation must be performed very carefully, otherwise the wrong end of the burrow may perhaps be picked, and a drop of serum exuding will swamp the acarus beyond all hope of recognition. The parasite, you must remember, is exceedingly small,—scarcely the one-thirtieth of an inch in diameter,—and of a color and transparency almost those of serum itself. You must be careful, therefore, I repeat, or you will almost certainly fail to obtain it.

It is the female acarus which burrows in the way I have described, in order to deposit its ova. The male insect crawls about over the surface of the skin, and may be detected with the aid of a lens by those who are more than usually fortunate. He is exceedingly difficult to find.

Scabies is a very rare disease in Philadelphia, on account of the well-known habits of cleanliness to which our people are accustomed. A comparatively small number of the inhabitants of this city live crowded together in tenement-houses, and bathing is frequent. Besides this, comparatively few emigrants arrive at this port, while in other cities, as Boston and New York, whole ship-loads are frequently emptied into the population, bringing the disease with them and spreading it in all directions.

The consequence is that scabies is much more common in those cities than in Philadelphia, and you will find ten or twenty cases in New York to one here.

I will not give you at this time the treatment of

scabies in general, but merely the plan which we shall pursue in the present instance, which is as follows:

Let me begin by advising you, whatever application it may be of which you make use, not to make it too strong. Were we to employ the official sulphur ointment, for instance, in this case, containing as it does four drachms of sulphur to the ounce of lard, we should make the patient's condition worse for the time than before, since an artificial irritation would in all probability be set up. He already has eczema from severe and long-continued irritation of the skin, and any strong application would only tend to aggravate the inflamed skin.

We shall, therefore, in the present instance, make use of the following formula:

R Flor. sulphuris,
Bals. Peruvian., āā ʒii;
Adipis, ʒiv.—M.

This ointment is to be thoroughly worked into the affected portions of the skin every morning and evening for four days. If this has been thoroughly done, the scabies itself will by that time be cured, and there will remain only the artificial eczema produced by the presence of the acarus. This, the cause having been removed, will probably get well spontaneously, nothing more being needed than bathing. You must not expect, in a case like this, that all itching will cease the moment the disease is put an end to. The mere nervous excitability brought about by long-continued sleeplessness and irritation will not at once subside. We shall, however, expect that, when this patient appears before us a week hence, most of the itchiness shall have subsided, and that he shall enjoy a good night's rest.

It will be some time, however, before all traces of the eczematous eruption shall have disappeared, and it may be necessary to hasten this result after a few days by such an ointment as the following, to be applied morning and night, after bathing:

R Acid. carbolic., gr. x;
Ung. zinci ox. benz., ʒii.—M.

ORIGINAL COMMUNICATIONS.

STRYCHNIA IN ATROPHY OF THE OPTIC NERVE.

BY GEORGE C. HARLAN, M.D.,
Surgeon to Wills Ophthalmic Hospital.

AS the value of strychnia in the treatment of amaurosis may still be considered, to a certain extent, *sub judice*, or as, at any rate, its use is by no means so general yet as it might be, the report of a few cases in which it has been given a faithful trial may not be out of order.

Though the records of ophthalmic literature show that strychnia has been used in this disease occasionally and in a desultory way for years, principally by means of applying the powder to blistered surfaces on the temple, or by rubbing it in the form of oint-

ment about the brow, perhaps to Nagel belongs the credit of having, in 1871, reintroduced it, employed it rationally and systematically, and given it a recognized place in ophthalmic therapeutics.

Nagel, in all his cases, administered the drug by subcutaneous injection, and selected the temple as the place of its introduction; and, with few exceptions, all other surgeons who have adopted the treatment have followed the same plan.

Gori, of Amsterdam (*Annales d'Oculistique*, July and August, 1872), gave it as the result of his experience that this treatment might effect decided improvement even in cases where the loss of vision was accompanied by evident anatomical changes, but that the mode of administration insisted upon by Nagel was not essential. To avoid the inconveniences that sometimes resulted from frequent hypodermic injections, he dissolved the nitrate of strychnia in tincture of iodine, and painted it daily on the temple and around the orbit, and claimed that this method was equally efficient.

Dr. C. S. Bull, of New York (*Am. Jour. Med. Sciences*, April, 1873), gives decided preference to hypodermic injection, but thinks it a matter of no importance what point is selected for the operation, and chooses the fore-arm as a matter of convenience.

Dr. Chisolm, of Baltimore, who has contributed several interesting articles on the subject to the same journal, and who was, I believe, the first to call attention to it in this country, began with hypodermic injections in the arm, but was afterwards convinced that identical results could be obtained by internal administration.

A matter of great practical interest is the dose that should be given. This has shown a decidedly upward tendency. Nagel used subcutaneous injections of from one-fortieth to one-thirty-second of a grain, repeated daily or at intervals of one or two days, during periods of from a few days to three or four weeks; but much larger doses seem to be now very generally considered necessary. Indeed, it may be considered to be pretty well decided that the treatment has not had a fair trial in any case in which the remedy has not been pushed to the largest dose that the patient can comfortably or safely bear.

Dr. Chisolm, in his first report (January, 1872), says, "I commence usually with one-sixtieth of a grain, which I gradually increase to one-thirtieth twice a day (by hypodermic injection), in no case exceeding this last amount." In his last article (April, 1873) he gives it as the result of his extended experience that one-half grain daily, administered internally in divided doses, produces the best remedial effects.

He thinks that when these large doses have secured a tolerance, they may be safely continued for months, or may be even still further increased should they lose their effect. He tells us that the maximum dose can be attained in from fifteen to twenty days, but gives us no means of discovering at what time he has found the maximum curative effect to be produced. Dr. Chisolm has not given his cases, but only his general conclusions, and it is to be regretted that he has not been more definite on this point. Though detailed notes of cases make

sadly dry reading, they often make also the most reliable and useful kind of statistics.

In the seventeen cases reported by Dr. Bull, the period of treatment varied from six days to three months, and the maximum dose from the one-fortieth to the one-tenth of a grain of the nitrate, injected in some cases daily and in others every other day. He concludes that when we do not see any improvement after the first three or four injections, not much advantage is to be expected from its use. I am not quite inclined to agree with him in this, though his experience has been much more extended than my own.

In three very successful cases recently reported by Dr. H. Derby (*Boston Med. and Surg. Journal*, November 5, 1874), the periods of treatment were from four to ten weeks, and the maximum dose was in one case one-eighth, and in the other two one-fourth of a grain of the nitrate, injected in the temples at intervals of several days.

In my own cases, sometimes the sulphate in solution and sometimes the alkaloid in sugar-coated granules was given continuously in gradually-increasing doses, until decided symptoms appeared or improvement ceased. The maximum daily dose varied from one-fourth to one-half grain, and the periods of treatment from two to ten weeks. Perhaps the maximum dose might with advantage have been reached more quickly in some of the cases and have been increased in others.

In regard to the mode of administration, my belief is that it is a matter of little moment whether the nitrate, the sulphate, the acetate, or the alkaloid is used, or whether it is injected in the temple or the arm, or given by the stomach, provided the system be brought thoroughly under the effects of strychnia. I would not suspend the use of the drug until a decided effect had been produced, or be disposed to continue it long afterwards unless the improvement in vision still progressed, which has not occurred in any of my cases.

A good deal has been written about the particular conditions of the nerve to which this treatment is applicable; but my limited experience rather confirms the impression derived from the study of the practice of others, that it rests entirely on empirical grounds, and that the ophthalmoscope furnishes no reliable data for deciding whether strychnia is likely to be of use or not. Though it may be said, in general terms, that those cases offer the greatest hope of improvement in which there is least evidence of anatomical change, even this rule is by no means without exceptions, as is shown by the fortunate result in Case V. In this case it was evident, both from the previous history and the ophthalmoscopic appearances, that the condition of the nerve was the result of inflammatory changes.

Only one of my cases belonged to the class to which Dr. Derby calls attention as being particularly amenable to this treatment. I allude to the form of disease called "tobacco amaurosis," or "alcohol amaurosis," or more comprehensively, and perhaps more correctly, as those who drink or smoke to great excess are likely to be generally regardless of sanitary laws, "amblyopia ex abusu."

Dr. Schoen (*Annales d'Oculistique*, September and October, 1874), considering the pathology of these cases to be, in the commencement at least, retinal anæsthesia, has prescribed santonin, and claims that it has given him even better results than strychnia.

In the mysterious form of amblyopia that is often met with in hysteria I have tried strychnia only once, and with no other effect than a violent headache; a decided increase of "nervousness," and general discomfort. I have not thought it worth while to try it in cases where vision was entirely lost, or where a high degree of amblyopia had existed for a long time; nor have I had any experience, as yet, in its use in amblyopia from disuse, though others have obtained excellent results in the latter class of cases.

As the best way of showing the progress of the cases and its relation to the increasing dose, I give the following extracts from the hospital records.

Case I.—J. F., a day-laborer, aged 62, stated that his sight had been failing for two years, but that he had found out, by accident only, six months before, that the left eye was quite blind. In the right eye there was vision of $\frac{2}{30}$ (that is, he could distinguish No. 80 only of Snellen's test-types at twenty feet, instead of No. 20, and consequently had only one-fourth the average acuteness of vision). In the left eye there was complete white atrophy of the disk, and no perception of light. In the right the atrophy was evident, but not so advanced. There was some central limitation of the field of vision. The pathology of the case was obscure. It seemed to be one of simple progressive atrophy, as there was no sign of local inflammation and no history of cerebral symptoms.

Treatment was commenced, October 20, by one-twenty-fourth grain of strychniæ sulph. given internally three times a day. This was continued until November 7, without improvement.

November 7.— $V = \frac{2}{30}$; ordered four-twenty-fourths grain daily.

November 17.— $V = \frac{2}{30}$; ordered three-twelfths grain daily.

November 26.— $V = \frac{2}{30}$? (doubtful); ordered three-twelfths grain daily.

December 3.— $V = \frac{2}{30}$? (doubtful); ordered three-twelfths grain daily.

December 15.— $V = \frac{2}{30}$ distinct, and some letters in XXX.

December 22.—Had continued to take three-twelfths grain daily, but without further improvement; and, though there was no muscular spasm, he had a good deal of headache and malaise, and treatment was discontinued.

Case II.—O. M. was entered on the record as a case of "tobacco-amaurosis." He was a shoemaker, and had been in the habit of smoking a pipe, while at work, the greater part of the day. His sight had been gradually failing for about nine months, and for some weeks he had been obliged to give up his work entirely. The external appearance of the eyes was natural, except that the pupils were slightly dilated and moved sluggishly. His vision was only $\frac{1}{100}$ in each eye, little more than enough to enable him to go about without assistance. The ophthalmoscope showed nothing abnormal but a slight blanching of the disks.

March 20.— $V = \frac{1}{100}$; ordered strychn. sulph., three-thirty-seconds grain daily.

March 31.—No improvement. Ordered strychn. sulph., four-thirty-seconds grain daily.

April 6.— $V = \frac{1}{100}$ in R, $\frac{1}{80}$ in L; ordered strychn. sulph., five-thirty-seconds grain daily.

April 13.— $V = \frac{6}{80}$ in each; ordered strychn. sulph., three-sixteenths grain daily.

May 13.— $V = \frac{6}{80}$. Had omitted the medicine for some time. Commenced again with three-twenty-fourths grain daily.

May 18.—Ordered three-eighths daily. May 21, three-sixteenths. May 27, four-sixteenths.

May 29.— $V = \frac{8}{40}$? Ordered to continue four-sixteenths, though there was slight spasm. June 1, five-sixteenths.

June 8.— $V = \frac{8}{40}$ distinct. Ordered three-eighths grain daily.

June 15.— $V = \frac{8}{80}$; ordered one-half grain daily.

July 1.— $V = \frac{8}{80}$; ordered to continue.

July 6.— $V = \frac{1}{20}$, which enabled the patient, with convex glasses, to return to his work without difficulty. The improvement in vision in this case is represented mathematically by the difference between the fractions one-twenty-fifth and one-half.

Case III.—M. O., aged 22, could see to read until she was fifteen years of age, and then her vision gradually failed. She was excessively nervous, and subject to "spells" which, from her account, seemed to resemble catalepsy.

The ophthalmoscope showed bluish-white atrophy of disks, and indications of old choroiditis. Strychnia was administered, commencing with one-twenty-fourth grain three times a day, and gradually increased to one-twelfth, when symptoms of poisoning appeared, and treatment was suspended at the end of two weeks. No improvement.

Case IV.—C. K., 33 years of age, stated that six or seven years before, he had had typhoid fever, and had been subject to frontal headaches since; that he had occasional attacks of dimness of vision immediately after the sickness, and that about one year ago the dimness commenced to increase rapidly, and became permanent. When he came to the hospital there was barely enough sight left to enable him to go about the streets alone. In the right eye there was entire obliteration of the inner side of the field, and he could count fingers, with difficulty, in the outer half. With the left he could distinguish the letters of No. 70 at one foot in the centre of the field, and only No. 200 at either side. The ophthalmoscope showed decided blue atrophy of the disks, though the retinal vessels were not very much diminished in size. Treatment was commenced July 9 with one-tenth grain daily, the dose being gradually increased at intervals of a few days.

August 24.—He had been taking two-fifths grain daily for five days, and his vision had increased in the left eye from $\frac{1}{70}$ to $\frac{1}{40}$? Not much improvement in the right.

August 31.—Had been taking one-half grain daily since the 27th, without further improvement. As he complained of headache and muscular spasm, treatment was discontinued.

Case V.—E. H., about 20 years of age, the daughter of a farmer in the interior of the State, had been in the hospital more than a year before. She had, at that time, well-marked optic neuritis, with engorgement of the retinal vessels, but without "choking" or decided swelling of the disks. The neuritis was evidently of cerebral origin, as it was accompanied by paralysis and other unmistakable symptoms. Under the use of mercurial inunction, iodid, potass., and quinine and iron, her vision had risen from $\frac{1}{20}$ to nearly $\frac{2}{30}$ when she was discharged. At the time of her re-admission there was still slight hemiplegia, and her vision had fallen to $\frac{1}{40}$. The retinal vessels were contracted, the disks were whitened, and there was perceptible atrophic cupping. Strychnia was administered, in gradually increasing

doses, until it had to be discontinued on account of the sudden appearance of alarming symptoms of poisoning. When she recovered she was delighted to find that her sight had greatly improved, and that she was able, with comparative ease, to read a letter from home, which had been utterly impossible before.

Five months afterwards, she wrote that the improvement in her vision had been permanent, though her other symptoms had grown much worse. The following record is from the notes of the Resident Surgeon, Dr. J. A. Lippincott, who watched the case with great interest and care:

"June 5, $V = \frac{4}{80}$; ordered strychniæ sulph. three-thirtieths grain daily; June 12, ordered three-twenty-fourths grain daily; June 16, three-twentieths grain; June 22, three-sixteenths grain; June 27, three-fourteenths grain; July 2, three-twelfths grain; July 8, three-tenths grain: still no improvement.

"July 12, $V = \frac{5}{80}$; ordered three-eighths grain daily.

"July 16, $V = \frac{6}{80}$; ordered three-sevenths grain daily.

"July 21, $V = \frac{8}{80}$; ordered three-sixths grain daily.

"Complaints of inability to speak distinctly, from stiffness of the tongue.

"July 24.— $V = \frac{14}{80}$. Taken in the evening with spastic contractions of the voluntary muscles, accompanied by delirium of an hysterical character. Stop strychnia July 31.

"The symptoms above mentioned continued for the past week, intensified at night, and requiring large doses of morphia and chloral to subdue or moderate them. Chloroform by inhalation was tried, but with merely transient benefit. This morning the patient is rational, and screamed with delight on finding herself able to read the address and contents of a letter that was handed to her. Can read No. 3 Snellen with ease, and No. 2½ with some effort. Resumed the strychniæ sulph., in doses of three-sixteenths daily.

"August 8.—No further improvement; discharged."

A point of great interest in this case is the fact that improvement did not commence until the patient had been under treatment more than a month and the dose had been increased to three-eighths grain, and did not reach its maximum until she had been brought thoroughly, and, as we feared, dangerously, under the influence of strychnia.

DISLOCATION OF THE HEAD OF THE FEMUR FORWARD ON THE PUBIC BONE.

BY J. R. SHELLENBERGER, M.D.,

Mt. Airy, Philadelphia.

THE accident occurred in a gentleman aged 64 years, in good health, and with well-developed muscles. He stood by the side of a rapidly-moving train, and with his left hand caught the iron railing, and at the same time put his left foot on the step. He was violently swung upon the platform, and, recovering himself, found his right foot turned outward, and judged at once that dislocation had taken place.

I saw the gentleman twenty minutes after the receipt of the injury, and found him entirely unable to walk, and in great pain. On examination, the limb was three-fourths of an inch shorter than the left, the foot and knee turned outward. The head of the femur could be distinctly felt upon the ramus of the pubes, outside of the femoral artery, both being very prominent.

The reduction of the case was extremely difficult.

The patient was thoroughly etherized, and three separate times during the day manipulation and the pulleys were tried, but both failed, though most persistently and conscientiously applied. Twenty-three hours after the accident, after a full dose of morphia and a good sleep, it was reduced by manipulation alone, Drs. Agnew, Hunt, Darrach, and Cooper having all been called in consultation.

The patient was placed upon a table, and his hips fixed by binding him to it with a folded sheet. Then, by flexing the thigh until the trochanter major rested just beneath the anterior superior spinous process of the ilium, a fulcrum was made of the latter bone and the head pried out from the pubic bone, when, by a sudden inward rotation, the head glided down; but, instead of entering the acetabulum, it went around that cavity upon the dorsum of the ilium. From this position, however, it was easily dislodged by flexion, outward circumduction, and outward rotation, when it readily slipped into the socket. No inflammation followed, and the patient at present writing, three weeks after the accident, is doing remarkably well.

Prof. Gross says, "The pubic dislocation is an extremely uncommon one, and might, therefore, almost be classed among the rare forms of the accident." Rare indeed, when surgeons of forty years' experience have not met with a case of the kind!

Sir Astley Cooper's experience was that out of twenty cases of dislocation of the hip, twelve were on the dorsum of the ilium, five in the ischiatic notch, two in the foramen ovale, and but one on the pubic bone.

ARSENIC AS A REMEDY FOR ASTHMA.

BY GEORGE ROBERTS, M.D.

IN the *American Journal of the Medical Sciences* for January, 1874, attention was called to the use of arsenic in asthma. I have had under my care the past summer a case of long suffering,—a lady who had moved to Wisconsin, Minnesota, and finally to Nebraska, to obtain relief by the change of air.

Mrs. H., aged 50 years or more, Norwegian, asserted that she had not been able to rest in the recumbent posture for more than a year. It was midnight when I called, April 1. The paroxysm was relieved by chloroform,—the patient sleeping.

The following day Fowler's solution was administered, gtt. v three times a day, and continued with no bad symptoms. After the third day the patient was so much relieved as to be able to attend to her household duties.

Having a troublesome cough, a mixture containing potass. cyanid. and morph. acet. was given, which relieved her.

It is now Nov. 23; the patient is robust and apparently well, with no tendency to asthma. She occasionally has a slight cough.

CREIGHTON, KNOX CO., NEBRASKA.

A WRITER in the London *Lancet* asserts that the constant use of powdered charcoal as a dentifrice will produce a blue line on the gums closely simulating that of lead-poisoning.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. H. C. WOOD.

Reported by JOS. BERENS, M.D., Resident Physician.

CEREBRAL HYPERÆMIA.

GENTLEMEN,—I will occupy the remaining few moments of my hour by saying a few words about a case that terminated fatally in the hospital a few nights since. The notes of the case are these:

Jane McG. was brought to the hospital in the evening of the 8th of October. She had spent the previous night in a station-house, where, during her stay, she had had a number of epileptic convulsions. Her history is that of a hard drinker and degraded character generally. It was also ascertained that she had never been subject to epileptic attacks previously. When first seen in the ward, she presented the appearance of a person in a drunken stupor: face deeply flushed, carotids pulsating violently, head hot, eyes staring, pupils dilated and not sensitive to light, conjunctiva almost without sensibility, pulse 112, hard, bounding, and full, respiration 33 to 36 per minute, deep, and somewhat stertorous in character, temperature 106° . Stupor so profound that she could barely be roused to make an ineffectual effort to put out her tongue, which was dry and brown. There was a contused wound of the scalp, two inches long, and penetrating to the skull, which was not fractured. She received two drops of ol. tigllii, and, this not proving effective in three-quarters of an hour, the dose was repeated. During the next hour she had five epileptic convulsions, which were very violent, lasted about a minute, and were not followed by anything akin to sleep except in the first instance.

An hour after the second dose of ol. tigllii, it had produced no evacuation, and a large injection of soap-and-water was given. This was followed in a few minutes by the discharge of an enormous amount of fæces. Ice to the head, mustard to the feet, and turpentine stupes were now applied, and she was given sixty grains of bromide of potassium. In twenty minutes the temperature had fallen to $104\frac{1}{2}^{\circ}$, but there was no corresponding amelioration of the other symptoms. During the next two hours she had eleven convulsions, all very violent. Another dose of sixty grains of bromide of potassium was administered. At the end of the next hour there had been four more convulsions, but the pulse had fallen to 93, and the temperature to $102\frac{1}{2}^{\circ}$; in addition, the patient began to perspire freely. During the following hour the pulse fell to 90, and was much softer and more normal in quality. The general symptoms also lacked in a marked degree the sthenic type which had characterized them at first; the patient seemed more conscious; there was but one convulsion. A thirty-grain dose of bromide of potassium was administered. During the next hour the temperature fell to 101° , the pulse remaining at 90. The patient still perspired copiously; there was but one convulsion.

The following hour was marked by a general change for the better; pulse 88, temperature 101° , respiration quiet, perspiration much less excessive. Pupils and conjunctiva both quite sensitive. At 5 A.M. (Oct. 9), an hour afterwards, the temperature was 100° , and the case seemed to be progressing favorably. Fifteen grains of bromide of potassium ordered every two hours, with continuation of ice to the head. At 7 A.M. the temperature was 102° , pulse 98, skin dry. Ordered a weak milk-punch, with other treatment. At 2 P.M. the pulse was 120, respiration 44, temperature $104\frac{1}{2}^{\circ}$.

At 7 P.M., temperature 105° , pulse 180, respiration 60.

At 12 M., temperature 106° , pulse 160, respiration 70.

Patient in a reeking sweat, which saturates even the blankets on which she lies.

At 12.15 P.M., patient died without a struggle.

Now, what was the matter with this patient? In convulsions accompanied by unconsciousness, the cause may be set down as cerebral. These convulsions were not hysterical, as the temperature was too high; for the same reason they were not due to chronic epilepsy, as is also shown by her previous history; and, on the same authority, we are justified in saying they were acute; the temperature also excluded the diagnosis of uræmia and of alcoholic poisoning, for it has been repeatedly and satisfactorily proved that in both of these the temperature is lower than normal. The convulsions, however, were undoubtedly epileptiform, and in such convulsions accompanied with high temperature the cause is usually found to lie in the onset of an exanthematous or blood-disease, or in an inflammation about the brain.

Thus, when she first came in, the question lay between cerebral inflammation and intense systemic fever, and to decide which of these was all that was necessary for treatment. In this connection, gentlemen, I wish to impress upon you the necessity of learning to regulate your treatment by general principles, and not to hesitate to act in the absence of a definite diagnosis. All of you, in the course of your future practice, will meet with cases where an exact diagnosis is impossible, yet where prompt and efficient action is requisite to preserve life. Under such circumstances you must use your common sense in adapting the therapeutic weapons at hand to the emergency before you, and feel no trepidation because you cannot fix a name to the train of symptoms you are called upon to combat.

But in this case what was to be done? If the case was one of blood-poisoning, the patient ought at once to have been put in a cold bath, or subjected to some other mechanical means for withdrawing heat, as this should always be done in cases of exanthematous diseases with severe nervous symptoms, when the temperature is above 105° . If the case was one of acute cerebral inflammation, bleeding would have been the proper course, and of very necessity this would have lowered the temperature. But here is a dilemma. If in the high temperature of exanthemata we bleed, the chances are that we will kill our patient. If, on the other hand, the same temperature exist in cerebral hyperæmia, and we do not bleed, the patient will probably die. But convulsions in the adult are rare in exanthemata; in addition, there was the wound of the head, which indicated a possible cause of inflammation. Moreover, the pulse is stated to have been hard and full,—not the full gaseous pulse of a blood-disease, but the full strong pulse of intense inflammation. Unfortunately, I did not see the patient until the day after her admission, when it was too late for any treatment. If I had seen her when she came in, I perhaps would have bled her. And, gentlemen, once you make up your mind bleeding is the proper thing to do, especially in such a case, bleed for *effect*, and not by *quantity*. Take twenty, thirty, or forty ounces, till what you desire to effect is accomplished. In all cases of intense sthenic inflammation, as of the brain, the peritoneum, etc., if you do not bleed at once and thoroughly, you will often lose patients whom you might have saved.

The brain before you is from the case we have just been discussing. You will observe here, what very often happens, that even the most intensely-marked cases of cerebral hyperæmia often leave comparatively few post-mortem traces behind them. Here the brain-substance seems perfectly normal; the meninges also show but little congestion, except in one place, on the anterior left lobe, in a position on the other side of the skull from and opposite to the wound of the head. The intense

congestion here indicates that this has been one of those cases where the shock received at one point on the head has been transmitted and expended itself at a point directly opposite.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

SERVICE OF PROF. WILLARD PARKER.

Reported by J. M. HARVEY, M.D.

CASE I.—A. B., aged 55, has tumors in different parts of his body, on back, arms, knees, and feet. His general health is and always has been good; never had any disease; he knows of nothing to cause this trouble. He says he cannot move his toes; has lost the power of voluntary motion in them.

This case, gentlemen, is a very unusual one. The first question is, What kind of tumors are these? All tumors are divided into two classes,—benign and malignant. To which class do these belong? They are not cancerous or malignant, they are benign tumors.

The man is healthy; he has no syphilitic or any other taint; and these tumors have existed for five or six years, giving rise to the natural inference that they are benign. Such inference is not, however, always correct. A patient once came to me with a tumor which he had had for nineteen years. It gave him no trouble until within six months of my seeing him, when it commenced to be painful. I removed it, but the tumor returned again; it became malignant after having existed as an apparently benign tumor for nineteen years.

Next comes the histological test. What is the character of these tumors? Are they bone, fibrous, or cartilaginous? I have never seen a case precisely like this. The tumors are callous,—as hard as if they were fibrous in their character. I remember the case of a stage-driver who had forty or fifty tumors of a fatty nature on different parts of his body, while his general health was good, and he lived with his tumors on him until he was eighty years of age, and then died of something else. There is another kind of tumor, called neuroma, which may be diagnosed by pressure upon it, producing a peculiar sensation similar to that which is felt when the "crazy-bone" is struck.

The tumors in this man's case do not yield such sensation, and are probably fibrous in their character.

Now, in relation to diagnosis: first, these are tumors; second, they are benign; third, in regard to their histology, I cannot say until a portion is put under the microscope. My advice is to leave them alone for the present. The man has a good appetite, sleeps well and feels well. If they should pain him, there is no objection to his using a blister; but, as blisters are out of fashion now, he can use a little iodine as a counter-irritant.

Case II.—A little boy 8 years old, with a tumor on his neck. Gentlemen, here, you observe, is another tumor. Is it solid or fluid? It is fluid. You observe the little fellow is pallid; he has not enough red corpuscles in his blood. His parents are healthy. His father does not smoke, and in this respect is a very sensible man. Many a poor child has been sent to his grave by tobacco. There is no man whose system is saturated with tobacco and rum who can have healthy children. If a man must smoke, he ought to have sense enough to go out in the open air, and not live and sleep in a room full of poisonous tobacco-smoke. A man is not fit to be called a man who has to take a pledge to keep from using tobacco or rum. I use neither, but I have taken no pledge except the pledge to do the best I know for myself.

That tumor has fluid in it. You have got pus there.

There is not force enough in the boy's system to get up an inflammation. If the little fellow had roses in his cheeks, that tumor would not be there at all. The diagnosis of Dr. Janeway that it is a cold abscess I confirm fully. I remember of having as a student a lesson on the diagnosis of pus by its fluctuation. An old doctor from the country said in the hospital where a tumor was being examined, "You city fellows don't think a country surgeon knows anything, but you are mistaken; you will find as good brains in the country as anywhere. There is pus in that tumor there, deeply-seated pus." The others laughed in derision, but he said, "I tell you there's pus there." One of the surgeons cut down carefully, but did not find any pus. "Give me the knife," says our country friend, and, plunging it in deep, the pus squirted out.

I have a few things more to say pertinent to this case. That little fellow should be turned out to pasture in the country, where he could browse and have plenty of milk and fresh air. The little fellow is too much shut up; too much confined to the house and school-room, where the atmosphere is bad.

There is another thing I want to refer to. One of God's greatest and best gifts which come down to us is the sunlight. No animal or vegetable can be well and thrive unless it gets the sunlight. Never build your house on the north side of a hill; do not surround your house with trees, but locate yourself so that the sun can get at you. The effect of sunlight upon man has been tested by experiment. The barracks of a large foreign city were arranged north-and-south. The soldiers on the north side were fed, clothed, and placed under exactly the same conditions as were those on the south side. Would you suppose there would be any difference in the death-rate? Do you suppose the death-rate on the north side would be greater than on the south? The death-rate was three to one; that is, for every one on the south side there were three on the north side. There was nothing to ascribe the difference of that death-rate to except that there was sun on the south side and none on the north.

Gentlemen, I will give you some more information. This very day a gentleman gave me an account of a very interesting case. You know at the present time the world is crazy on beef-steak. You would suppose that the best service a man could render his Maker was to eat beef three times a day. If they don't eat beef, they take beef-tea, which is a nasty, dirty mess. Old-fashioned beef-soup is good, and I like it very well, but this beef-tea made out of extract of beef is nasty, muddy-looking stuff. Take a child who has scarlet fever and the albuminuria which accompanies it; what kind of food would be best for him? If you had a patient with Bright's disease, what kind of food would you give him? You would give vegetable food,—substances that do not contain nitrogen. Why? Because nitrogen is excreted by the kidneys in the form of urea and uric acid. Suppose the kidneys were sick, would you impose work upon them? You would spare them. When you feed your patient, who has albuminuria, with beef which contains nitrogen, you increase the function of the kidneys, and this is just what you should not do. If you have a diseased organ, the first and most important thing is rest. Well, this case referred to is a little boy, now nine years old. When five years of age, he commenced self-pollution. Though he had been punished again and again, and every expedient resorted to for the purpose of making him break off this practice of masturbation, it was of no avail. On careful investigation, it was found that the boy had been in the habit of eating tenderloin for breakfast, tenderloin for dinner, and tenderloin for supper. He had eaten three tenderloins a day, thus living on nitrogenized diet. The gentleman was a scientific man, and he looked at the urine

and found it loaded with urea and uric acid. The boy was taken off this animal food and put on vegetable diet, and in less than two months he had no desire for and consequently discontinued the fearful practice referred to. This shows you how important it is to look into these things. I believe there is many a case of epilepsy due entirely to the practice of eating too much animal food. I tell you these things now that you may put them in your memorandum and keep them, as they are important practical hints which you cannot get from your text-books.

TRANSLATIONS.

MEDICAL PROPERTIES OF CANTHARIDES.—Dr. Alessandro Cantieri contributes to *Lo Sperimentale*, October, 1874, an important article upon cantharides. Experiments performed upon various animals (dogs, rabbits, frogs) lead him to the following conclusions:

1. Cantharides introduced into the economy alters the blood-mass, disintegrating and contracting the globules if placed immediately in contact with them, and contracting them alone if the contact is only made through absorption.

2. It diminishes the contractile force of the heart and the vascular walls, and hence lessens the arterial tension. It augments the frequency and rapidity of the cardiac movements, increases the temperature, causes loss of nutrition and general enfeeblement,—phenomena which indicate a real and especial fever.

3. Cantharides produces hyperæmia by blood-stasis in the various organs, and, if the dose is large, gives rise to true inflammations. According to these experiments, it is certain that it excites hyperæmia of the brain and spinal cord; softening to a slight degree in the former, but more decided in the latter. This softening in the cord is more marked in the dorsal and lumbar enlargements, particularly in the latter, where it may give rise to paralysis of the lower extremities. This is observed in dogs, rabbits, and frogs; in the latter there occurs, besides, entire loss of reflex activity.

4. The meninges are the seat of hyperæmia always more marked at the base of the cranium, and particularly where it supports the medulla oblongata. It is this, probably, which, in dogs and rabbits, gives rise to the great frequency of respiration and acceleration of the circulation, with occasional intermittences, which have been observed.

5. The hyperæmia always brings about inflammation of the genito-urinary apparatus, either desquamative or parenchymatous nephritis, with presence of albumen in the urine. It causes venereal excitement, and may give rise to abortion.

6. Cantharides administered internally causes, besides all the morbid alterations mentioned, a true gastro-enteritis, with extensive congestion and ulceration of the gastric mucous membrane, accompanied by a secretion of yellow mucus. Sometimes, when injected into the veins, it does not cause ulceration, but congestion of the gastro-intestinal mucous membrane, with diarrhœa. This occurs frequently in dogs, rarely in rabbits.

These conclusions stated, it remains to apply them in practical medicine; and this is attempted by Dr. Cantieri. His experiments and observations, which have been made on a great number of patients and with a great deal of care, throw considerable light upon the subject. His very conscientious study of the subject terminates by indications for the employment of the vesicatory, and finally by the following conclusions:

After having remarked that blisters should be allowed to remain applied during as short a time as possible, that

they should not be made use of in the case of nervous and delicate subjects, in dropsical subjects, particularly in those cases where the anasarca is dependent upon renal disease, in infectious diseases, cholera, or chronic cardiac affections, he adds that the application of blisters of cantharides can only be of use in medicine for their rubefacient action in simple venous hyperæmias or stases, as in those caused by insolation or abuse of alcohol, in simple cardiac affections, and in other diseases of the same kind.

If Dr. Cantieri gives us these indications, it is because he has recognized that cantharides, applied as a blister, debilitates the action of the heart and of the vessels, instead of exciting them; that other stimulants, administered internally, are much preferable; that it causes hyperæmia of the kidneys, active and passive; and that in diseases of these organs it should be entirely banished from use, as well as in cardiac affections,—above all, where albumen is found in the urine. The blister should not be employed, he remarks, in the substitutive method, since, besides its local action, it possesses an absorptive, which may have grave results. It may be employed as a rubefacient in the cases above mentioned, but sinapisms and hot foot-baths present fewer inconveniences.

In acute diseases, in typhoid and other infectious fevers, where adynamia and ataxia prevail, its use should be guarded, since by absorption of the principles of the cantharides, which alter the blood-globules and diminish the contractile force of the heart, infection is piled upon infection. In addition, cantharides alters the cerebro-spinal axis, and therefore brings about disorders in the vital functions depending upon it. It augments inflammations and produces blood-stasis, for it arrests the contractility of the vascular walls and paralyzes the vaso-motor nerves, or rather is active in changing the products of inflammation by altering the crasis of the blood. Finally, it favors cardiac collapse, in place of preventing it, as is generally believed.—*Bull. Gén. de Thérap.*, November 30, 1874.

THE WET SHEET IN SCARLATINA (*The Lancet*, November 14, 1874).—Mr. John Taylor believes that the wet sheet affords the best *external* means for eliminating scarlatinal poison and preventing destructive sequelæ. It promptly suppresses pyrexial heat and itching; produces sleep, with a soft secretive skin, more or less continuously; and enables the digestive organs to accomplish that great desideratum in the treatment of scarlatina,—viz., absorption of highly nutritious food. It may be repeated, on the recurrence of the febrile paroxysm, two, three, or four times in twenty-four hours, the patient remaining enveloped from half an hour to an hour. Mothers and nurses who have witnessed its efficacy are most earnest in its repetition. His plan of procedure is to immerse a nightgown, slit up at the front, in hot water (half a pint to a pint), pure, or medicated with a drachm or two drachms of tincture of capsicum, or in the infusion of three or four pods; or in mustard-water, the clear supernatant fluid from a tablespoonful of mustard to a pint of water; extending the gown over the feet by means of a towel immersed in the same fluid, both to be well wrung out and suddenly applied, and the patient quickly packed in two blankets previously placed on the adjoining sofa or bed; another blanket, or two pillows, or an eider-down quilt, covering all.

He does not intend this treatment to exclude the ordinary forms, but believes that if it is judiciously incorporated with them it will be the means of saving many lives that would otherwise be lost, and of diminishing the duration and severity of the sequelæ.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

PROF. ERICHSEN'S ADDRESS ON AMERICAN SURGERY.

WE suppose that there is not a reader of this journal who has not been gratified at the hearty recognition by Mr. Erichsen of the true position of American surgery.

Considering the brief stay which was made by the Professor, his assertions as to facts are singularly correct, as his deductions are certainly very sagacious. There are, however, a few points which a longer tarry would have given him more light upon. First among these we note, "With the exception of hospitals for the diseases of women, I know of no special hospitals in any of the large American cities." Confining our attention to Philadelphia alone, there are the Wills Hospital for Diseases of the Eye, and the Orthopædic Hospital, both of them very active and very flourishing institutions. Moreover, the University Hospital may be looked upon as a congeries of special hospitals, since it is largely composed of special wards, attended by specialists, for diseases of the eye, of the ear, of the skin, of women, and of the nervous system.

Antiseptics are probably used in this country more extensively than Mr. Erichsen believes them to be: at least, so some of our prominent surgeons state.

The museums of this country are not in the "undeveloped" condition which Mr. Erichsen represents them to be in. So far from those of this city being

inferior to those of Boston, that of the University of Pennsylvania alone is much superior to anything of the sort in the country north of Washington, whilst the museum of the Pennsylvania Hospital is itself probably equal to the Boston collection. Unfortunately, the University museum was packed up, *in transitu* from the old to the new building, during Mr. Erichsen's visit: otherwise he would probably have been as much pleased at its richness as he was with other features of American surgery.

WE copy from the Annual Report of the State Hospital for Women and Infants:

"The Board desires to correct a misapprehension which, doubtless, exists to some extent, that the object of the institution is the care and shelter of the deliberately vicious; but the following provisions of the By-Laws will correct that error:

"'No applicant shall be received unless she be clean and free from contagious disease.' 'No unmarried woman shall be admitted to the Lying-in Hospital except for her first confinement.'"

We commend most highly this charity, whose object is to rescue from a life of sin and infamy those who have been led astray. There have been seventy children born in the institution, and as yet no death of a patient.

THE *London Doctor* says to its subscribers who are in arrears, very emphatically, Pay up! and threatens, first to publish the names in its own columns, then to hand them to the protective trade associations, so as to ruin their credit, and finally to sue all parties.

RULE OF THREE.—A problem for any one interested in institutions adhering to the mediæval system of medical instruction: Harvard Medical College, first year, new class, 29; second year, new class, 51; third year, new class, 106. What will the tenth class be?

CORRESPONDENCE.

MEDICAL DOINGS IN BALTIMORE.

AT the regular meeting of the Medical and Surgical Society of Baltimore, held on the 10th instant, Dr. Morris related a case of *placenta prævia* to which he was called by the attending physician. The lady was only eight months advanced in pregnancy, and had had several floodings. At the time of confinement delivery was effected with forceps, and Dr. Morris was called in on account of *adherent placenta*. The doctor said he had seen a number of these cases, but never one like this. The placenta was nearly all detached,

but a small closely-adherent portion, which they were unable to remove, was firmly attached to the posterior surface of the uterus. After delivery there were several gushes of blood, but the injection of liq. ferri sub-sulph. checked the flow. The lady died three days after, from anæmia.

Dr. Uhler asked whether transfusion would not have been useful.

Dr. Morris said that it would have been justifiable, but that he had read all the cases of transfusion reported in the journals during the last year, and he doubted the efficacy of the proceeding.

Dr. Evans was of the opinion that if loss of blood was the cause of death, transfusion would have been eminently proper.

Dr. Erich thought that the absence of a person with the necessary experience and instruments was to be deplored, and hoped some one would prepare for emergencies of this kind. Dr. Morris was right in regard to the failure of cases of transfusion in which lamb's blood was used, but with human blood several cases have succeeded.

Dr. Seldner had seen the operation performed several times in Vienna, but it had failed in every instance. Hebra performed it in a case of burns, and Späth tried it after Cæsarian section.

A number of members then engaged in the discussion, touching more especially upon the kind of animal from which the blood was taken and the class of cases likely to be benefited by the operation. It was thought to be worthy of trial in cases of hemorrhage, but useless in phthisis and other debilitating diseases, especially as it could not be used until all other means had failed.

Dr. Morris read an interesting paper on "*Pelvic Cellulitis*." He said the disease was known to the ancients, and was described by Paul of Ægina, but that we are most indebted to Doherty, of Galway, and Churchill, of Dublin, for a careful investigation of the subject. Sir J. Y. Simpson pursued the inquiries, and much enlarged our knowledge, and to him we owe the name now used. It has received various names by different authors,—viz., abscess of uterine appendages (Churchill); parametritis (Virchow); perimetritis (Byford); peri-uterine cellulitis (Thomas). The doctor proposed to follow Simpson in his description of the disease, but he should be compelled to differ with the authorities on several points. First, in regard to frequency. In a practice of twenty-nine years, embracing over two thousand cases of labor, he had met only two cases in which the symptoms were as described. He had met a number of cases of pelvic peritonitis, and had at times been almost disposed to agree with those who deny the existence of cellulitis. As to the seat of the disease, it may be in any of the parts surrounding or adjoining the uterus. McClintock says it is usually in the broad ligaments. There is an immense amount of cellular tissue in the pelvis upon which the disease can vent its force. The products of the inflammation are serum, pus, coagulable lymph, and sloughing cellular tissue. The disease may be found in mar-

ried women who are childless, and even in virgins, but it is usually met with from three to ten days after delivery. The English do not separate pelvic cellulitis from psoas, iliac, and peri-rectal abscess; while the French, with Nonant at their head, recognize only inflammation of the broad ligaments as entitled to the name. But few cases are met with uncomplicated by disease of the cellular tissue of the broad ligaments. Parturition, abortion, excessive sexual intercourse, cold, blows, etc., may act as causes of the disease. He thinks pessaries may with great propriety be added to the list (case in the October number of *Obstetrical Journal*, produced by a pessary). Parturition and abortion produce about two-thirds of the cases, but it may result from any operation on or injury to the pelvic organs. Dr. M. has seen great constitutional disturbance and inflammatory fever result from the introduction of a tent. It may occur at all ages; and even in the male it may follow operations on the pelvic contents. There is such a case reported in the *Lancet* for November 21. In regard to the seat, McClintock found the right iliac region affected in twenty-seven cases, the left in thirty-four, both in three, and eight supra-pubic. The disease may usually be recognized by vaginal or rectal examination, making pressure with the other hand upon the hypogastrium. The principal guides are pain, tenderness, and constitutional disturbance. Hæmatocele, fibrous tumors, and pelvic peritonitis are the only affections likely to furnish any difficulty of diagnosis. He is convinced that many cases of pelvic peritonitis are called cellulitis. It rarely becomes chronic, as chronic pelvic abscess is one of the results rather than one of the stages of cellulitis. Suppuration may occur in a few days, but usually does not for two or three weeks. The prognosis is usually favorable, so far as life is concerned. Simpson says that tubercular disease of the peritoneum may be set up. Treatment: Before effusion, leeches to hypogastrium, perineum, and anus; warm fomentations, opium, and sedatives; aconite to quiet heart's action; hypodermic injections of morphia; anodyne suppositories and absolute rest. He is not much in favor of mercury, as it is likely to do harm in scrofulous women. Dr. Hintze, of this city, gave mercury and opium, in cases of parturition, to forestall and arrest inflammatory action. Blisters, as a general thing, are not advisable; and purgatives should never be used; the rectum should be unloaded by enemata. The diet should be light and altogether fluid, as milk, beef, broth, etc. After suppuration, the aspirator can be used advantageously.

Dr. Erich said that Dr. Morris laid great stress on pessaries producing the disease. Would he condemn them on that account?

Dr. Morris replied that pessaries can produce it, but not usually; he would not condemn them for that reason only.

Dr. Montmonier saw a case of cellulitis in which part of the pus was evacuated below Poupart's ligament, the other portion pointing in the perineum.

Dr. Lynch has never had a case of post-partum cellu-

litis, but had had two cases of ante-partum. In the first case he was called to attend a woman supposed to be in labor. Upon making an examination, he found a swelling to the left of the os, and there was a discharge of an immense quantity of pus. He gave opium and washed out the vagina. The woman was confined two weeks afterwards, and did well. The second case was a similar one. He was called to attend a woman supposed to be in labor. On examination, a tumor was detected on the left side of the cervix. He gave full doses of opium, and the woman went on for three weeks, when labor came on, and, during a severe pain, the tumor burst, and the vagina was flooded with pus. He had to perform craniotomy. The woman got well.

Dr. Seldner remarked that, in Vienna, Prof. Braun usually punctured these abscesses: in some cases, through the vagina; in others, through the abdominal walls.

The Medical and Chirurgical Faculty held a special meeting on the 4th instant, to take action on the death of Dr. Gerard E. Morgan, who died very suddenly from heart-disease, on Nov. 30. He was a fine physician, and for many years an active member of the American Medical Association.

Yours, etc.,

MEDICUS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Will you allow me a few lines in your valuable journal, in order to say how interested I have been in a communication by my friend J. G. Richardson, M.D., "Microscopist to the Pennsylvania Hospital," entitled "Notes on the Performance of Two One-fiftieth Objectives"?

Moreover, you will see that I have been complimented therein; and, as I never could bear *such* honors otherwise than gratefully, I beg just a word in friendly reply.

If my memory is not at fault, we have heard before of the peculiar properties of these lenses, especially of "my one-fiftieth dry, made by Powell and Leland," and of "my one-twenty-fifth immersion, made by Wales," and I think these historic objectives enabled their owner, by "long study and constant practice," to detect a skin on the blood-corpuscles, brief accounts of which optical triumph have come to us in the journals of this and other countries, and also in the proceedings of societies which indulge occasionally in the dissemination of useless knowledge.

I was naturally, perhaps justifiably, interested, then, when these two superior lenses, and another doubtless as good, were "tested" by an expert, and the result published for our information.

It is to be regretted that Dr. R. did not define more clearly the special optical and mechanical peculiarities of these lenses, for they are nationally dissimilar, and when he writes of their special performance he leaves the impression that inexcusable defects exist either in the lenses or in the manipulator.

Let us see. "The pleurosigma angulatum offered no difficulties;" of course not, with a one-fiftieth. Yet was it resolved, or were only lines seen? A good four-tenth resolves it into *dots* by central light easily.

Surirella gemma, recommended by Hartnack as a test for high powers, measures, on an average, one-two-hundred-and-fortieth of an inch, longer diameter. The transverse lines are seventy-two in the one-thousandth of an inch; the longitudinal, eighty-four to the one-thousandth. The "basket-like arrangement of these lines, produced, according to Hartnack, by elongated hexagonal areolations," and which Dr. R. says "came distinctly into view in a noteworthy way," is a misinterpretation of structure, as proven long ago by Dr. Woodward and Mr. Moorehouse, who, with others, resolve them into dots, and under lower powers than the one-fiftieth. The separation of lines or dots only eighty-four thousand to the inch is not the limit of best modern lenses, but they do lie on the border-line of unpractised illumination, and hence Dr. R. did not accomplish resolution in Surirella.

When these lenses were turned on the Amphipleura pellucida, only the "markings near the edges of the frustules" were seen, and the Boston one-fiftieth did the best work. In well-defined words, the test was not resolved at all, only seen, like most microscopical work. In the hands of Prof. J. Edward Smith, a Tolles dry—and *very* dry—one-eighth resolved the amphipleura into beads; and, with lowest eye-piece, both sets of striations were easily seen. (See *Mon. Mic. Jour.*, September, 1873.)

We are told next how the Podura scale (what species?) looks under high power, by *central* light. On some good specimens of the doctor's own mounting, we are informed that "the definition of the exclamation-marks is somewhat superior" under the Boston lens to that under "the one-fiftieth made by Powell and Leland, and the immersion one-twenty-fifth made by Wales." How much superior? What was the character of this definition by *central* light?

Here the histologist is interested, and naturally wants to learn whether these high-power lenses will help him in his honest work. If this central-light definition was so *inexpressibly* bad, what were the aberrations?—negative, or positive? How shall we judge from the accounts? Which is it don't define?—the lens or the—oh, I *won't* think it! However, in optical fogs like these, discoveries have been made. Neither bears the C eye-piece "without marked loss of definition."

We have bad definition, again, on the salivary corpuscles,—at least we infer from the account that the molecules were nebulously revealed by all the lenses. The salivary corpuscle is an easy test for definition, a good one-fifth showing every morphological element with vivid distinctness.

These high powers, however, reach their climax on the Bacterium. These organizations were "limited by a delicate hair-line, almost as fine as can be drawn by an ordinary writing-pen." This is better work, and a clearer report. Is it not strange that the same lenses

which cannot define the test podura or molecules in salivary corpuscles should come up to hair-lines in Bacteria? There may have been some special force operative here, which only the initiated can understand.

"In order to overcome the insuperable obstacle which has hitherto prevented a one-fiftieth being tested in Philadelphia, I have devised the following method, etc.,"—covering the object with thin mica. This is too fast. In the aboriginal days of microscopical technology, mica was used in lieu of glass (and it is still employed by some who are content with approximations), but was abandoned. It is not homogeneous, like good glass, and is so easily scratched that misinterpretations were unavoidable by inexperienced observers. If those Bacteria were seen through mica, I can understand the hair-lines, and "cylindrical lenses," and all the rest. Moreover, the old plan as now revived as original is exceedingly clumsy, and presents the insuperable impediment of two thicknesses of glass beneath the object, which would interfere with *best* illumination. The step is retrograde, and, compared with slides covered with thin glass by Möller,—thin enough for the one-fiftieth,—and which have been in our hands for several years, would be useless.

Finally, Dr. R. acknowledges these high powers are "not quite achromatic." Opticians do not seek to remove *all* color from their high combinations; they think best definition is secured by deficient compensation in the flint-glass systems; some allow the flint to preponderate. But Dr. R. does not tell us where this color appears,—within or without the focus,—nor what region of the spectrum is robbed to complete the picture.

My only object in writing is to bear my insignificant testimony against such testing of lenses, and to discountenance general microscopical platitudes, because they enfold beginners with chromatic haze, conveying the unmeant impression that the truth has been uttered, whereas only fragments and torn patches of the garment of the immortal goddess have been held up to view.

J. G. H.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, NOV. 25, 1874.

DR. JAMES S. BAILEY, PRESIDENT, in the chair.

EPULIS OF THE LOWER JAW.

DR. LEWIS BALCH reported the following case: Thomas Burns, æt. 8, American, admitted at St. Peter's Hospital, October, 1874 (service of Dr. Balch). The mother says that almost a year ago she noticed that one of the teeth on the right side (the canine) had grown inside of its fellow to the left. The incisor was extracted, and a "lump of flesh" grew in its place. This did not increase in size until almost five weeks before admission. At that time the canine was drawn by a doctor, who lanced the "lump." Nothing but blood followed the incision, and since that time the lump has grown quite rapidly. Patient, up to the present time, has enjoyed good health. Family

healthy. Patient has been in the habit of picking up cigar-stumps in the street and smoking them, and also of chewing tobacco. Examination shows a dark-colored fungous growth in the right side of the mouth, part in front and part behind the teeth, having its base in the lower jaw. It has pushed before it the incisor teeth, crowding them over the ones adjoining, rendering the teeth very irregular.

Dr. Balch removed the fungous growth, but, owing to the hemorrhage, it was decided not to remove the bone, which was largely implicated, but to allow the patient to recover from the present operation, and then proceed to remove the part necessary for complete extirpation of the growth. The hemorrhage was controlled by pressure with picked lint. Microscopic examination of the part removed showed it to be cancerous in character, characteristic cells being easily found.

October 30.—The patient, having recovered from the first operation, was etherized, and an incision three and a half inches long made along the under edge of the jaw, from a point about an inch and a quarter to the left of the median line, to the right facial artery, which was not severed. The flap thus made was turned up over the mouth, and the bony part of the tumor removed by bone-forceps. The incision was made in the manner stated, so that if the disease was found to extend through the whole depth of the jaw, excision could be performed. It was, however, found unnecessary to excise, hard bone being below the alveolar processes.

Two ligatures were applied, and the wound closed by three hare-lip pins, with intermediate sutures of fine silk. A packing of picked lint was applied on the inside.

November 2.—The pins were removed to-day. There is some swelling of the face, but the patient does not suffer any pain, and is in excellent condition.

November 4.—Four sutures were now taken out. The wound has healed by first intention, almost throughout. The ligatures came away to-day. Inside the mouth the wound looks healthy, with but little discharge. A lotion of nitric acid, 3i to Oj of water, is ordered as a wash.

November 13.—External wound is entirely healed. Some few pouting granulations are seen springing from the right side of the internal wound, and look suspicious. At the suggestion of Dr. Swinburne, they are touched with chloride of zinc. Patient is around the ward.

November 16.—The exuberant granulations are touched with chloride of zinc. Patient doing well, and wound granulating healthily.

November 18.—Granulations have subsided, and the wound is rapidly healing.

November 23.—Patient nearly well, and left the hospital without telling his intentions.

DR. THOMAS BECKETT said that from the drawing he recognized the case as having been seen by him in the latter part of last summer. When he saw it there was a tumor of some size, and it had lifted the teeth upward; they were lying, as it were, in the top of the tumor.

DR. G. H. BENJAMIN said that he had treated a similar case, which was supposed to have arisen from an ulcerated tooth. In lancing it, nothing but blood flowed. A year afterwards, the tumor was developed into a considerable mass on the outer side of the gum.

OPERATION FOR FEMORAL HERNIA.

DR. O. H. E. CLARK reported the following: Mrs. H., about ten years ago, in lifting a wash-tub, became ruptured, about ten weeks after confinement. Two years later, a severe attack ensued, on lifting a heavy

vessel of water. After some difficulty, the intestine was returned, but no preventive treatment followed. Dr. Clark was summoned in haste in the night, January, 1873. He found a double femoral hernia existing. The left side was of the size of a hen's egg, tense and painful to the touch, and appeared as if an entero-epiplocele.

There was intense pain in the abdomen; pulse 122, weak and small; countenance ghastly, and covered with a clammy perspiration. The voice was weak, and the patient completely prostrated, and seemingly near death. Taxis having failed, gr. $\frac{1}{2}$ of morphia was administered, and a large warm linseed poultice, sprinkled with tincture of opium, was applied. This composed the patient, and she slept for an hour or more, when she felt relieved. Taxis was again repeated, and the hernia was returned. The first intimation of the return was a peculiar sensation and gurgle of flatus in the abdomen. The plan operating as successful was that recommended by Malgaigne.

March 20, 1874, Dr. Clark was again summoned. The patient had passed her sixtieth birthday; was very thin, with bad appetite, and suffering from some urinary derangement.

The left hernia was now strangulated, and was large and hard. Vomiting and pain were present. Patient had resorted to her usual method of reduction, and had failed. She was less weakened than at Dr. C.'s first visit. The tumor was about the size of a large goose-egg, and occupied the space intermediate between Poupart's ligament and the perpendicular. When pressed, it gave a sensation like that of a large sausage coiled on itself in a sac under the integuments. It was dull on percussion, and hard to the touch, excepting on that portion near to the ring, where it was resonant on percussion and soft to the touch. The use of morphia and of the poultice, with attempts at taxis, were made a number of times in the next few days. But, all attempts having proved abortive, anæsthesia was produced with chloroform, the effect being maintained with ether. Dr. Featherstonough kept her under its influence for more than three hours. Taxis was attempted by all present, and, having failed, a transverse incision of about two inches, and another perpendicular to the first, of three inches, completely exposed the tumor, covered by layers of fascia devoid of adipose tissue.

The doctor departed from the usual manner of procedure, and, instead of dividing the different layers on the director with a scalpel, he made use of a pair of small, sharp scissors, with one of the blades made blunt at its extremity, which, although small, is somewhat square. It was from a case of instruments made for operating on the eye. With these scissors he carefully divided the tissues down to the sac. Dr. Clark was of the opinion that the scissors operated with more precision than the director and scalpel; they enabled him to divide the fascia much more minutely than could have been done with the director passed between the layers and cut down to with a scalpel; and in opening the hernial sac their superiority was manifest. Long directions are given in text-books how to hold the scalpel flatwise, so as not by any mischance to cut the bowel. With the scissors no such accident can occur; and, while they do not exclude the director, on which they may be guided, they may to a certain extent be used without it. The small, blunt, square point will divide layers with much greater minuteness than the director, and without the danger of the sharp cutting point of the scalpel. Before the director can be passed under a layer of fascia, it must be incised with the scalpel, and while doing so with a sharp-pointed instrument an accident might possibly occur. When the sac has to be opened, it can be pouched up and nipped with more precision than can be attained with the scalpel, which is always

liable to slip in a little farther than was intended. Again, when the director has been introduced and run along the internal surface of the anterior wall of the sac, if a knife is used from the outside to cut down to the director, or is run along the groove, or if the wall of the sac is lifted from within on the edge of the knife, possibly a piece of the intestine might be opened which has doubled over the director; but if the blunt blade of the scissors is run in the groove of the director, and kept well pressed against the wall of the sac, it can actually be seen, and the operator may feel certain that nothing intervenes between it and the sac in cutting that structure.

The hernial sac was whitish-yellow, thick and tough, and appeared united to the fascia by minute blood-vessels. After having become satisfied that this was truly the sac, the operator requested the assistant to push the contained viscus upward towards the abdomen; he then pinched up a minute fold of the sac and proceeded to open it as described. Serum ran out in large quantities. After the sac was empty and the hernia was returned into the abdomen, the patient was placed in a position favorable to its exit.

An examination of the protruded part showed it to be omentum. From the symptoms and sensation of returning flatus, there was no doubt that some of the intestine was originally extruded, and was returned by taxis. The omental mass was about three inches long by two wide and one and a half thick; it was very pale, and firmly embraced by the falciform border of the fascia lata. All attempts to return it failed.

Hey's ligament, as well as the deeper Gimbernat's ligament, having been divided in the usual manner, then carefully the whole was carried with the finger a little to the right, into the cavity of the abdomen. Even with the free incisions used, considerable difficulty was experienced in returning the mass, from its size, and, at the end of the process, from firm and evidently old adhesions, two of which were severed near the sac, and, as they bled freely, light ligatures of fine silk dipped in carbolic acid solution were tied around them, and, after their ligated and strangulated tips had been touched by the same strong solution, they were introduced into the abdomen.

The second mass, being of considerable size, caused more anxiety,—fearing decomposition and consequent peritonitis, besides the possibility of pyæmia; but it was held that to return it into the abdomen, after a thorough application of carbolic acid solution, was the best thing practicable.

The pulse being weak, the parts were brought together and closed with carbolized sutures, leaving about one-quarter of the perpendicular incision open below, to favor drainage. A few straps of adhesive plaster were put over the superior part of the wound, over which a pledget of lint soaked in carbolic acid was lightly placed, and as lightly retained *in situ* by a bandage.

After reaction, the patient was removed to a bed the feet of which were raised four inches on blocks of wood. A small pillow was put under the thigh. Pulse 110. Ordered morphia, gr. $\frac{1}{4}$, absolute quiet, and a small piece of ice occasionally. She slept soundly during the night, awakening the next morning heavy, stupid, and feverish; pulse 120, and rather irregular; temperature 103°. Some pain in the abdomen, but she was so oppressed that no connected answers were obtained. Applications of hot carbolized water were made over the abdomen, extending over the inguinal region and thigh, and covering the wound.

These applications were changed every half-hour for the next two days. Diet—beef-tea, milk, and arrow-root, in very small quantities, often repeated. Ordered potassii acetat and potassii nitrat, there being a history of urinary troubles.

Second day, 9 A.M.—Pulse 104, extremely weak and irregular; temperature 102.7°; respiration 32; tongue dry. Wound has united by first intention, in the upper or horizontal incision, but the perpendicular cut has not. Its edges are pale, and pus commences to ooze out.

Third day, 10 A.M.—Wound sloughing in all directions, especially invading the abdominal integuments; one and a half inches above Poupart's ligament, slough is very deep. Excised dead tissue freely; took out all sutures and applied charcoal poultices, made with carbolic acid lotion.

Besides beef-tea and milk, ordered 1 gr. quinine, 2½ grs. sulph. soda, and one teaspoonful of brandy, every three hours. Passed one pint of urine in twenty-four hours. 9 P.M., sloughing extended still farther on abdomen. Is very weak; ordered quinine, gr. i every hour, and morphia, gr. ¼ every evening.

Fourth day.—Had a good night's rest; passed a more comfortable day, disturbed, however, by colicky pains. Wound surrounded by a broad, red, erysipelatous border. The edges keep crumbling down, but the bottom of the wound is granulating. Opened an abscess in the lower and deep part of wound. Had wound stuffed with lint cut very fine and steeped in carbolic acid lotion, and packed tight charcoal poultices over the whole. Dressings to be changed every three hours.

Fifth day.—Improving. Pulse 80; temperature 90°; urinates freely; wound looks better. Granulations very flabby. Touched it freely with nitrate of silver, then had it packed with lint soaked in Edinburgh red wash, made with carbolic acid lotion, thus:

Zinci sulph., gr. xvi;
Spt. rosmar., gtt. ii;
Spt. lavand. comp. ad ʒviii.

6 P.M.—While sleeping, felt faint. Awoke cold, dizzy, unable to see out of left eye; limbs numb. Gave brandy, and she revived. In the evening, flushed and feverish. A red and painful spot forming on the left shoulder.

Sixth day.—An abscess formed on the left shoulder, just below the angle of the left scapula; gives great annoyance. Feverish and restless.

Seventh day.—Patient feels worse. A large sinus exists in lower part of wound. Passed in the director and cut down to it from without, and inserted a tape seton. Opened abscess in back, out of which ran very fetid matter. Patient looks weak, yellow, and sunken. Ordered beef-juice and eggs, besides previous treatment. Touched the wound with nitrate of silver, and then packed it with lint dipped in carbolic acid lotion.

Gave starch-water injections to move the bowels.

Eighth day.—Much better; pulse 100. Wound granulating. Approximated edges with adhesive plaster.

Ninth day.—Has vomited, probably from disagreement of food. Had a liquid stool. Wound granulating. Omitted packing; strapped it lightly.

Tenth day.—Improving.

Thirteenth day.—Recovering rapidly.

Sixteenth day.—Wound almost healed; thoroughly convalescent, and in three months the hernia appeared radically cured; but it has since occurred again, and obtained considerable size. In spite of her experience, she will not wear a truss.

The points of special interest are as follows:

1. The reduction of the enterocoele under the influence of an anæsthetic, leaving the epiplocele behind. From the symptoms, the peculiar feeling of returning flatus, and subsequent diminution in the bulk of the tumor, there is no doubt of the correctness of this view. After this sensation and sound of returning flatus and of giving way had been distinctly experienced, there occurred what had not taken place before: the tumor became smaller on pressure and larger when suspended, showing

that a communication had been established with the interior of the abdomen; also, that the peculiar sensation and sound referred to as occurring in the early part of the taxis were not due to serum passing into the cavity of the abdomen, for such did not occur whenever that took place. The strangulated piece of bowel need not have been large. In Gross's Surgery there is mentioned a case where the protruded intestine was not larger than a peanut deprived of its shell.

2. The size of the tumor. Femoral hernia is stated, as a rule, not to exceed an almond in size. This case shows an exception.

3. The large amount of serum. Only a few drachms are generally found in femoral hernia. In this case, at least eight drachms flowed away. The returning into the abdomen of the serum when the hernia was subjected to pressure, thereby considerably diminishing its bulk, and leading to delusive hopes of its reduction, is a peculiarity not mentioned by authors, and worthy of being remembered, as it might lead to an undue prolongation of the taxis, to the great injury of the patient.

4. The temporary radical cure of the hernia, following on the extensive sloughing that resulted from the manipulation and operation, and which might probably have become permanent had the patient been more governable and had she steadily worn a truss.

Dr. Clark asked how long the operation should be deferred. He believed the answer to the question was becoming more unanimous, that the moment the physician feels satisfied that taxis is not likely to succeed, and when the patient's symptoms progressively increase in severity, then, without waiting and subjecting the patient to dangerous manipulations, the operation should be performed.

The surgeon should always keep clear in his mind that but one cure exists,—the return of the intestine into the abdominal cavity,—and that every moment it is out is not simply a moment lost, but that increased danger is incurred. The circulation in the strangulated portion is at first impeded, and later altogether arrested, and the involved intestine is marching surely to gangrene, and the patient to death. In other diseases there may be a time of suspension, during which it may be prudent to avoid heroic measures; in them, time alone is not a source of danger; but here, unless reduction is made, the patient dies.

Another important point to keep in mind is, that reduction at any time will not save: it must be reduced while the intestine or omentum is yet in a fit state to live, and not to produce inflammation of the peritoneum when returned. He did not mean to condemn a scientific, persevering taxis, but the rough practice of continuing beyond the limit of safety, either as to the force used, the severity of the symptoms, or the valuable time consumed during which the patient might be saved were the operation performed.

Let us inquire, now, whether the operation, if performed in time, when the system and parts are in a condition in which recovery after any operation is expected,—whether the operation, thus performed, is fraught with the great danger which has so long made it a terror to the profession, or whether this estimation has not arisen from the operation being deferred until too late, and therefore followed by fatal results. It is believed by surgeons who have had most experience in operating under favorable circumstances, that the mortality of patients is materially diminished in such cases. Holmes's System of Surgery, the standard exponent of cotemporaneous British surgeons, says, "We believe that death resulting from strangulated bowels would be a rare occurrence if it were practicable to return every strangulated enterocoele within twelve hours after the commencement of the symptoms, even assuming that the

cutting operation be required to accomplish that end in every case." Sir James Paget, in his lectures on strangulated hernia, strongly urges his auditors to operate in all cases of hernia which have become totally irreducible, if vomiting continues at intervals, even if no other symptom seems to call for active interference; and he adduces numerous cases to prove the propriety of the rule. On another occasion he says, "I have no doubt that for every case in which an operation has been avoided by waiting, there have been two cases in which lives have been lost by waiting too long."

Sir James Paget has operated about one hundred times for strangulated hernia, and has had a large experience in this surgical lesion.

J. Cooper Foster, Surgeon to Guy's Hospital, says, "Make, then, one decided attempt, under chloroform, and, if you fail, operate. You cannot hear this too often, because forcible taxis and delay in operating are the great causes of death of all cases in our hospital. If I myself had a rupture, no one should try to reduce it except the operator, with the proviso that if he failed after a very moderate attempt, he should at once proceed with the knife."

T. Legros Clarke, Surgeon to St. Thomas's Hospital, holds "that the fatality of our cases is chiefly due to delay and the repetition of unsuccessful attempts at reduction by taxis. I am satisfied," says he, "that the risk attending an operation for strangulated hernia is very much aggravated. If gentleness and forbearance were more generally adopted in applying the preliminary measures undertaken to afford relief, and purgatives and procrastination (often self-inflicted) were eliminated from the treatment, I believe that the statistics of the operation for strangulated hernia would present a far more favorable aspect than is at present the case."

Dr. Frederick Hyde, in an article on hernia and its complications, published in the Transactions of the Medical Society of the State of New York for 1867, warmly advocates early operation; even, in many instances, after only fair trial of the taxis, in which advantage of all adjuvant means has been taken. The writer terminates his treatise thus: "It is objected, to an early division of the structure, that it is too spoliative a measure, and is in conflict with the doctrines of conservative surgery. We submit whether it does not savor altogether more of a justifiable conservatism to carefully divide the ligating tissue and relieve the already injured structure, than to repeat the trial to reduce them while we have the remaining unyielding structure." He is confident "that he has never seen a patient die on whom this operation has been made, from its own legitimate results, and his recollection assures him equally well that the fatality has been from the injury sustained by the parts before the incisions were made."

In these days of daring surgery, when the peritoneum—that cavity hermetically sealed to art by the fears of old surgeons—is boldly incised into for inches to withdraw therefrom an enormous cyst, fearlessly cutting away adhesions,—in these days, he says, herniotomy has lost its terrors, and surgeons at present generally agree that the fatal risk is not incurred in performing this operation, but in doing so too late. When a man is moribund, or surely going that way, operations are superfluous; and, blinded by delusive hopes of at length succeeding with taxis or other means employed, the surgeon too often allows his hapless patient to slip into that state in which all assistance is in vain.

Dr. MARCH spoke in praise of the paper read by Dr. Clark, and referred to the rarity of double femoral hernia. He was of the opinion that the dividing of the tissue with blunt scissors was a decided improvement.

He did not favor the idea of employing taxis long, but believed in operating early.

Dr. HANNON and others gave their views, which were essentially the same as those already expressed.

GLEANINGS FROM OUR EXCHANGES.

A REMARKABLE CASE OF PHLEBITIS (*Archives of Ophthalmology and Otology*, vol. iv. No. 1).—R. Wreden reports the case of a boy, æt. 15, who suffered from a terrible inflammation of the cerebral sinuses, caused by an acute inflammation of the middle ear, which had the characteristics of an otitis of the temporal bone.

After a slight improvement, the patient caught cold, and the inflammation of the sinuses returned with increased violence; high fever, with frequently recurrent rigors, continual nausea, with very frequent vomiting, giddiness, tinnitus, great weakness, apathy, somnolence, delirium, epileptiform convulsions, etc. The differences in these symptoms are all explained by the rapid spread of the inflammation of the sinuses from the right transverse sinus to the others.

Phlebitis of the internal jugular vein made itself known by enormous painful swelling of the corresponding side of the neck, without redness of the skin. The face was puffy and œdematous. There were clonic and tonic spasms of the sterno-cleido muscles, from irritation of the spinal accessory nerve in the jugular foramen. The phlebitis of the superior longitudinal sinus was marked by two symptoms of importance: repeated violent epistaxis, and epileptiform convulsions. These were due to the excessive choking of the blood-current from the surface of the brain. The affection of the right sinus cavernosus was manifested by phenomena of irritation and paralysis of the abductor nerve, the first branch of the fifth, and the oculomotor, and by phenomena indicative of blocking of the circulation in the eye.

The affection of the abducens, which came close to the outer wall of the cerebral carotid artery in the cavernous sinus, was indicated by internal strabismus of the right eye,—i.e., paresis of the external rectus. Pressure on the first branch of the trifacial caused unilateral headache, photophobia, etc.; pressure on the oculomotor caused ptosis. The symptoms of ischæmia of the eye were strongly marked, and consisted of œdematous swelling of the eyelids, of the conjunctiva of the eyeball, and the retro-bulbar connective tissue (exophthalmos).

The patient made a good recovery, the treatment having consisted of leeches, poultices, laxatives, and the administration of proper nourishment.

PROBABLE LEAD-POISONING FROM A BULLET LODGED IN THE KNEE-JOINT (*The Boston Medical and Surgical Journal*, November, 1874).—At a recent meeting of the Boston Society for Medical Improvement, Dr. Ellis reported the case of a man who had severe attacks of colicky pain in the abdomen, always preceded by obstinate constipation, and accompanied by vomiting. He subsequently had epileptic convulsions, became violently delirious, and died. About six weeks before his death, a blue line was noticed on his gums.

As it was known that twelve years previous the patient had been wounded in the knee, search was made, and a large conical leaden bullet was found imbedded in the inner condyle of the femur, its base being exactly level with the articular cartilage, its longest diameter parallel with the shaft of the bone between the two condyles. There was, therefore, a surface of

lead exposed to attrition, in a synovial cavity, where there was a constant secretion and absorption of fluid, and it would seem that there might have been absorption of some soluble salt of the metal.

PURPURA HÆMORRHAGICA (*The Lancet*, November 14, 1874).—Dr. W. B. Richardson divides purpura hæmorrhagica into three classes, distinct in their etiology, diagnosis, and treatment; the *aqueous*, in which the water of the blood is in excess, and the colloids substance holds the colloidal fibrin in undue solution; and the *vascular*, where there is a degenerative change in the capillaries, and rupture or transudation is facilitated. Dr. Richardson believes that the character of the eruption varies in these several forms.

NOTES AND QUERIES.

THE NEW SCRIPTURES,

According to Tyndall, Huxley, Spencer, and Darwin.

(Genesis, Chapter II.)

1. PRIMARILY the Unknowable moved upon cosmos and evolved protoplasm.
2. And protoplasm was inorganic and undifferentiated, containing all things in potential energy; and a spirit of evolution moved upon the fluid mass.
3. And the Unknowable said, Let atoms attract; and their contact begat light, heat, and electricity.
4. And the Unconditioned differentiated the atoms, each after its kind; and their combinations begat rock, air, and water.
5. And there went out a spirit of evolution from the Unconditioned, and, working in protoplasm by accretion and absorption, produced the organic cell.
6. And cell, by nutrition, evolved primordial germ, and germ developed protogene, and protogene begat eozoon, and eozoon begat monad, and monad begat animalcule.
7. And animalcule begat ephemera, then began creeping things to multiply on the face of the earth.
8. And earthy atom in vegetable protoplasm begat the molecule, and thence came all grass and every herb in the earth.
9. And animalcula in the water evolved fins, tails, claws, and scales; and in the air, wings and beaks; and on the land they sprouted such organs as were necessary as played upon by the environment.
10. And by accretion and absorption came the radiata and mollusca, and mollusca begat articulata, and articulata begat vertebrata.
11. Now these are the generations of the higher vertebrata, in the cosmic period that the Unknowable evolved the bipedal mammalia,
12. And every man of the earth, while he was yet a monkey, and the horse, while he was a hipparion, and the hipparion, before he was an oreodon.
13. Out of the ascidian came the amphibian and begat the pentadactyle, and the pentadactyle by inheritance and selection produced the hylobate, from which are the simiadæ in all their tribes.
14. And out of the simiadæ the lemur prevailed above his fellows and produced the platyrrhine monkey.
15. And the platyrrhine begat the catarrhine, and the catarrhine monkey begat the anthropoid ape, and the ape begat the longimanous ourang, and the ourang begat the chimpanzee, and the chimpanzee evolved the what-is-it.
16. And the what-is-it went into the land of Nod and took him a wife of the longimanous gibbons.
17. And in process of the cosmic period were born unto them and their children the anthropomorphic primordial types.
18. The homunculus, the prognathus, the troglodyte, the autochthon, the terragen—these are the generations of primeval man.
19. And primeval man was naked and not ashamed, but lived in quadrumanous innocence, and struggled mightily to harmonize with the environment.
20. And by inheritance and natural selection did he progress from the stable and homogeneous to the complex and heterogeneous; for the weakest died, and the strongest grew and multiplied.
21. And man grew a thumb, for that he had need of it, and developed capacities for prey.
22. For, behold, the swiftest men caught the most animals, and the

swiftest animals got away from the most men; wherefore the slow animals were eaten, and the slow men starved to death.

23. And as types were differentiated, the weaker types continually disappeared.

24. And the earth was filled with violence; for man strove with man, and tribe with tribe, whereby they killed off the weak and foolish, and secured the survival of the fittest.—*Cincinnati Commercial*.

IMPROPRIETY IN AWARDING THE CERTIFICATE OF THE PHILADELPHIA HOSPITAL (BLOCKLEY).

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I am credibly informed that to the students of the dental colleges of this city who attend the bi-weekly clinics of the Philadelphia Hospital (Blockley) is awarded the formal diploma or certificate of the institution, equally with the graduates of the regular medical colleges. Of the impropriety of this course there can be no doubt. As a certificate of attendance on clinical lectures at a general hospital, bestowed on medical graduates, little as such a document may really mean or be deserved, I do not now question its propriety. The certificate simply implies that the graduate, in addition to his ordinary collegiate course, has had at least some clinical opportunity at a general hospital. With regard to dental students, it may speciously imply a knowledge of the general subjects of clinical teaching, which, with their special and limited didactic course at the dental colleges, they cannot properly possess.

That the certificate of the Philadelphia Hospital, when thus loosely broadcast, is liable to abuse in being used as a guarantee of knowledge fitting its possessor, who is not a medical graduate, for the practice of medicine and surgery, is evident.

The clinics of general hospitals have but little bearing on dentistry, and there was never a general attendance of dental students at hospital clinics until the showy prize of the hospital certificate was promised to them at the Philadelphia Hospital. Now the dental students, in view of the expected pretentious document, attend that hospital in a body, with the distinct object, as several of them have asserted to me, of obtaining a certificate which no other hospital will give them.

If the rule of granting certificates of general hospitals to no others than medical graduates, and only on presenting evidence of such graduation, is to be departed from, a dangerous precedent of transgression will be established.

In another view of the matter, a hospital certificate that has become attainable without medical graduation will soon sadly depreciate in value.

The provincial doctor who adorns his office with the certificate of the Philadelphia Hospital will, on discovering a similar document emblazoned on the front door of the village tooth-drawer, be inclined to hang his depreciated testimonial out of sight.

I would not have the clinical opportunities of the dental student in any manner restricted, but he should not be awarded a credential that ought to be attainable only after medical graduation. To use the language of a good dental as well as medical authority, Dr. Garretson, in his recent article in your journal, "A specialist should not be received into the common brotherhood of medicine without his coming to a common platform as regards all that makes the doctor."

I am quite sure that the ethical bodies of our profession will agree with me that hospital certificates should be absolutely restricted to graduates of regular medical colleges, and that a contrary course must render the medical board of a hospital amenable to indictment of censorship.

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PHILADELPHIA MEDICAL TIMES.

SATURDAY, JANUARY 2, 1875.

ORIGINAL LECTURES.

ON THE PRINCIPLES WHICH GOVERN THE USE OF ELECTRICITY IN PARALYSIS.

An Abstract of a Course of Three Lectures delivered at the University Hospital

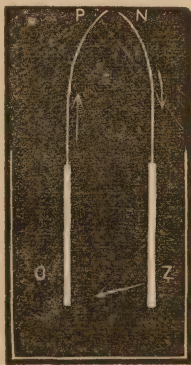
BY H. C. WOOD, JR., M.D.

LECTURE I.

GENTLEMEN,—In opening this winter's course I shall lay aside for a little while purely clinical teaching, in order to give you some instruction upon the principles that underlie the right use of electricity in paralysis; confining my remarks to this especial therapeutic employment of the force, because, beyond this point, medical electro-therapeutics is at present a perfect chaos, a mass of apparently contradictory facts out of which no spirit of man can bring any order until we have better, clearer ideas of the various diseases in which electricity is employed, as well as of the physiological action of galvanism. For a knowledge of these diverse facts you must trust rather to clinical experience than to scientific didactic teaching.

Let us to-day commence at the very bottom of the matter.

Electricity is a force which is developed in various ways, but which is essentially the same entity under all circumstances. When it is obtained by rubbing two surfaces together, it is known as frictional electricity; when by the union of two dissimilar metals, it is called galvanism. Frictional electricity is almost never used in medical practice, and I shall here say nothing more about it.



There are a large number of different patterns or arrangements of the elements which generate galvanism, but the ideal or typical cell may be said to be formed of two dissimilar metals immersed in some corrosive liquid, and connected with each other by a piece of wire externally. Under these circumstances the current starts from the metal most easily corroded, passing through the liquid to that less easily acted upon, and from this over the external wire to the starting-point. The external end

of the least-easily corroded plate is therefore always giving off electricity, and is known as the + or positive pole, whilst the corresponding end of the other plate is constantly receiving electricity, and is spoken of as the — or negative pole. When wires are attached to these plates they become, as it were, prolongations of the plates, and their ends constitute the poles. Thus, in the diagram, C = copper, Z = zinc, P and N = poles, and the arrows show the direction of the current.

As the electric current does not primarily exist, it is evident that in the typical or ideal galvanic cell there must be something which sets it in motion. This force is the so-called electro-motor force, and has been determined by physicists to be a definite quantity for the same combination of metals at the one temperature. This force is generated at the point of contact of the metals, and is in consequence of the law discovered by Volta, that when two metals are in contact with each other, a disturbance of the electrical conditions of those metals occurs. The amount and energy of this disturbance vary according to the nature of the metals, and experiments have shown that all metals have definite electro-motor powers or properties, and that they can readily be arranged in a regular series. A study of this series would, however, lead us far astray from the present point. The point which is to be especially borne in mind is the constancy of the electro-motor force, so that in any given combination of metals in a galvanic cell the electro-motor force is always the same, whether the plates of the metal be large or small, whether the solution be an acid, a saline, or pure water. The strength of the current is not, however, decided entirely by the electro-motor force of the cell. Every known substance refuses more or less imperiously to allow the passage of electricity. The best conductors oppose a really very great resistance. Now, it is evident this resistance is opposed to the electro-motor force, and that if it be greater than the latter it will altogether prevent the passage of any current. The strength of the current, then, depends upon the relation between the resistance and the electro-motor force; and we have the celebrated law of Ohm, which may be expressed by the formula

$$C \text{ (current strength)} = \frac{E \text{ (electro-motor force)}}{R \text{ (resistance)}}.$$

This law experiment has shown to be imperative: no increase or diminution of the size of the plates, no change in the character of the solution, affects it.

The resistance to the current in a galvanic combination is a double one: inside of the cell the fluid between the plates opposes the passage of the electricity, and outside of the cell the conductor which completes the circuit also offers a resistance. The reason a battery almost ceases to yield a current when water is substituted for the acid usually employed is not a purely chemical one, but simply because water is an almost complete non-conductor, and offers triumphant resistance to the current, whilst the acid conducts and readily allows the current to pass. The entire resistance (R) is then

made up of two factors: the internal resistance (IR), and the external resistance (ER). The formula of Ohm may therefore be read $C = \frac{E}{IR + ER}$.

As already stated, where the plates of a cell are increased in size the electro-motor force is not increased, but as the surfaces of the plates are increased the diameter of the conductor—i.e., the mass of fluids between the plates—is increased; and consequently, as the resistance in a conductor is inversely as the size of its cross-section, the strength of the current is increased. To make this a little clearer, suppose IR in a certain cell equal 10, then

$C = \frac{E}{10 + ER}$; if now the plates of the cell be

doubled in size, $C = \frac{E}{\frac{10}{2} + ER} = \frac{E}{5 + ER}$. A sim-

ilar result—i.e., lessening of the internal resistance—can be achieved by shortening the distance between plates in the cell,—i.e., the length of the conductor,—or by in any way making the intervening liquid a better conductor.

The change in the strength of a current by the increase of the size of the plates of the cells can readily be expressed by the formula of Ohm. If the letters signify as before, and the internal resistance be diminished y times by increasing the

size of the plate y times, instead of $C = \frac{E}{IR + ER}$,

C will be $\frac{E}{\frac{IR}{y} + ER}$.

If, instead of a single cell, a number of cells are arranged in such a way that the copper of one is connected with the zinc of the next, the electro-motor force of the combination is equal to the sum of the electro-motor forces of the cell: thus, if E = electro-motor force of the single cell, and y = the number of cells, the electro-motor force of the battery will be yE . It is also plain that the internal resistance of the battery is also increased y times, so

that the formula of Ohm will stand $C = \frac{yE}{yIR + ER}$.

Of course, the strength of a current is greatly affected by the external resistance. In very many instances the external resistance is very great. Suppose, then, this external resistance in a given case be 1000 times the internal resistance, the formula of

Ohm will read, $C = \frac{E}{IR + 1000 IR}$. It is evident

that under these circumstances IR, the internal resistance, becomes very insignificant, and that very little is gained by increasing the size of the plate,—i.e., by diminishing the internal resistance; for if the plates were increased fivefold, the increase of the current strength would only be the difference

between $\frac{E}{5 IR + 1000 IR}$ and $\frac{E}{IR + 1000 IR}$, a difference which is very slight. On the other hand, when the external resistance is very great, every-

thing is gained by increasing the number of cells,—i.e., increasing the electro-motor power; for

$\frac{5E}{5 IR + 1000 IR}$ gives a very different result from $\frac{E}{IR + 1000 IR}$. When, therefore, the external resist-

ance is many times greater than the internal, practically nothing is gained by increasing the size of the plates; everything by increasing the number of elements.

The converse of the above reasoning also holds. If the external resistance be very slight, the internal rises in importance. Thus, suppose $ER = \frac{IR}{1000}$.

Then the formula would be $C = \frac{E}{IR + \frac{IR}{1000}}$. In

this case a great deal is gained by increasing the size of the plates, for $\frac{E}{\frac{IR}{5} + \frac{IR}{1000}}$ gives a very dif-

ferent result from $\frac{E}{IR + \frac{IR}{1000}}$. In such a case, by

quintupling the size of the plates the strength of the current is practically increased fivefold. On the other hand, it is plain that when the external resistance is slight, the gain by increasing the number of cells is a slight one, for the internal resistance is increased as many times as the electro-motor force. Thus, if five cells are used, the

formula will be $C = \frac{5E}{5 IR + \frac{IR}{1000}}$, which will, of

course, give practically the same result as $\frac{E}{IR + \frac{IR}{1000}}$.

The law may then be stated to be that when the external resistance is very slight, increasing the number of the elements has no practical effect upon the strength of the current, whilst an increase of the size of the elements has the greatest effect.

When there is no very great disproportion between the internal and the external resistance, it is evident that the strength of the current may be increased either by increasing the size or the number of the elements.

Thus, if $ER = IR$, $C = \frac{E}{IR + ER} = \frac{E}{IR + IR}$; and increasing the size of the plates fourfold will give the formula $C = \frac{E}{\frac{IR}{4} + IR}$;

or increasing the number of elements to four will yield the formula $C = \frac{4E}{4R + R}$.

Perhaps the result will be clearer if figures are used. Suppose $E = 100$, $IR = 10$, and $ER = 10$. Then the first formula will be $C = \frac{100}{10 + 10} = 5$; the

second, $C = \frac{100}{\frac{10}{4} + 10} = 8$; the third, $C = \frac{400}{40 + 10}$

$= 8$. When, therefore, the *external and internal resistance are equally balanced, the current strength is equally increased by increasing the number or the size of the plates*. The application of these principles to electro-therapeutics is a very simple one. In the ordinary applications of electricity to the body the resistance of the tissues is enormous—very many times greater than the internal resistance of any battery, and consequently the latter may be totally disregarded. Hence for ordinary purposes the formula

stands $C = \frac{E}{ER}$, and power can be gained only by

increasing E ,—that is, by augmenting the number of cells.

When, however, it is desired to act upon the blood in an aneurismal sac, the needles are brought close to each other; and, moreover, the blood is a comparatively good conductor of the electricity. Hence, in such cases, the external resistance is so much reduced that the internal becomes of such importance that it should not be overlooked. It follows, therefore, that when an aneurism is to be acted upon the plates should be increased in size, whilst at the same time a number of cells should be used.

In the so-called “galvano-cautery” the current is not passed through the body at all, but through a wire, which is thus kept at a white heat. In this case the external resistance is vastly less than when human tissues form a part of the circuit. Hence it becomes a matter of importance to reduce to as great a degree as possible the internal resistance, and the elements or plates should be very large and should be placed very close to one another in the cells. The external resistance is not, however, so slight that it can be entirely overlooked, and hence a number of cells are combined with one another, so as to give sufficient electro-motor force.

You will notice, gentlemen, that I have in my lecture entirely avoided such expressions as quantity and intensity. It would occupy too much space for me to dwell upon the fact that, to use the language of one of the most eminent of living writers, “these terms are remnants of an erroneous theory.” It is, however, of the greatest practical importance that they be banished from electro-therapeutics. The amount of mystification which has been produced by talk concerning the therapeutic effects of currents of large quantity with low intensity as contrasted with those of currents of high intensity and low quantity is equalled only by the amount of nonsense which has been written. Currents of galvanism have really only one attribute,—*i.e.*, current strength,—and that is in strict obedience with the law of Ohm.

Again, a dense fog has been thrown around the subject of electro-therapeutics by the idea that there are various essentially different forms of galvanism. As you know, the current which flows from a cell or a combination of cells is spoken of as a *continuous*

current, or sometimes as a *primary current*; besides this, modern therapeutists use another series of currents, which are known as the *induced currents*.

The term *primary current* is often applied to one of these induced currents. If we employ the name *continuous current* for that current derived from the galvanic cell, we must continually be speaking of the interrupted continuous current, which certainly is inelegant. I shall, therefore, employ the name *chemical current* or *galvanic current* to designate that form of galvanism which is generated in the galvanic cell.

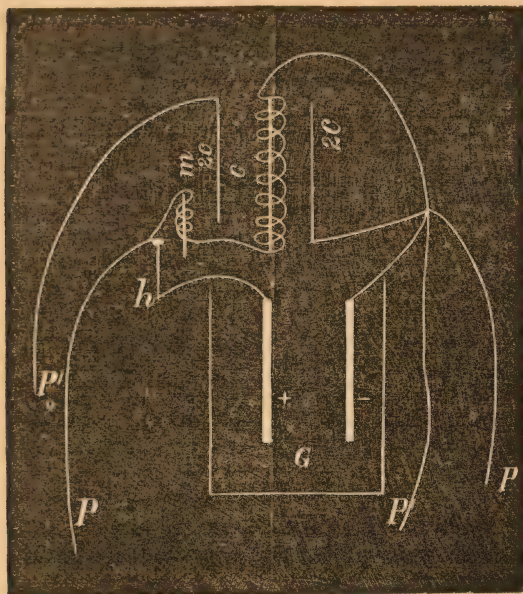
If a coil of insulated wire have a bar of soft iron placed in its centre and be surrounded by an external coil of wire, when a chemical current is passed through the first coil, owing to physical laws which I shall not stop to consider, every time that the galvanic circuit is completed or interrupted a brief current of electricity is induced in the inner or first coil, and also a similar current in the outer or second coil. The only physical facts which it is necessary for us to know are that these induced currents are very brief and of great strength, also that they are to-and-fro currents,—that is, run in opposite directions in each individual coil. Thus, in the inner or first coil, when the galvanic circuit is closed the induced current in the inner coil runs parallel to the generator chemical current, but when this current is broken the induced runs in a contrary direction. In the outer coil the induced current, which is instantaneously developed when the galvanic current is sent through the inner coil, pursues an opposite direction to that of the chemical current; but when the latter is broken, the return induced current in the outer coil runs parallel to the generator current.

As these induced currents run backwards and forwards, to and fro, in this way, it would appear that there could not be any negative or positive pole to the battery which generates them, for if one end or pole of the wire constituting the coil be negative in regard to the first induced current, it must be positive in regard to the second or return current. This is, gentlemen, assuredly true so far as concerns the outer or second coil, but is not true for the inner or first coil, as you will readily understand by means of this diagram of an induction battery.

It is plain that when the current is passing, the hammer h being in the position represented in the diagram, m will become magnetic and attract h . This at once breaks the current, and an induced current runs through the first coil and is received by the patient grasping the handles $P P$. The instant the current is interrupted, m loses its magnetism and the spring-hammer flies back. Now the circuit is closed, and for the second time an induced current runs through the first coil c . It is evident, however, that this induced current of closure will not pass through the body of the person grasping the handles $P P$, but will pass along h through the cell to the other end of the coil, as a shorter route and one of vastly less resistance. It is plain that from the inner or first coil the induced current of broken circuit alone passes through the body of the patient.

In regard to the outer coil, it is evident that when

the circuit is closed the momentary induced current must run through the body of him who grasps the handles P' and P' , and that the return current which passes when the circuit is broken must take the same route.



G Galvanic element, with the + and — metals in it.
 c Coil in which the primary induced current or currents of the first coil are generated.
 h Spring-hammer or vibrator.
 m A piece of soft iron becoming a magnet when the current is passing.
 2c Outer coil in which secondary induced current, or current of the second coil, is generated.
 P Handles of inner coil.
 P' Handles of outer coil.

It follows from the above considerations that the *current of the first coil runs through the patient only in one direction*, and electricians may correctly mark poles + and —; but that the *current of the second coil runs in both directions*, so that any designation of its handles as positive and negative is incorrect. The only justification for the marking of the secondary or outer current poles, as is often done, is found in the fact that the induced current of the broken circuit is stronger than that of the closed circuit. Hence it is that with very strong currents you can sometimes distinguish between the two poles when grasped in the hand. The difference is, however, a slight one, and for all practical purposes the induced current of the outer coil is a to-and-fro one, without any negative or positive poles.

If a strong continuous galvanic current be passed through a person, a shock is felt at the moment of making and breaking the circuit, but whilst the current is passing no sensation is perceived except at the points of entrance and exit. Or if the current be passed through the nerve of a muscle, that muscle violently contracts at the moment the circuit is made or broken, but whilst the current is flowing the muscle is quiescent. If an induced or faradic current be passed through a nerve, the muscle supplied by that nerve is thrown into a violent continuous spasm. The reason of this is obvious. The

so-called faradic or induced current is, as has already been stated, a succession of instantaneous broken currents for the first coil, and as brief to-and-fro currents for the outer coil; so that the circuit is continually being closed and broken, and the muscle is continually excited to action. There is, therefore, a different result achieved in the application of the continuous and induced currents, not because there is any real difference in their nature, but because the mode of application is diverse.

Most electricians to-day teach that the true galvanic current is very different from the faradic current, and many, like Duchenne, persist in asserting that the currents of the first coil are essentially different from those of the second. Galvanism is, however, galvanism, its nature and attributes probably always the same; the faradic currents are lacking in the chemical power of the continuous current because they pass so quickly that they have not time to exert a chemical influence. You know gunpowder can be passed so quickly through the hottest flame as not to ignite. The secondary induced current differs somewhat in its action from the primary, simply because the latter is not a to-and-fro current, and we cannot readily convert an induced into a galvanic or chemical current, because we cannot readily tie together, as it were, the ends of the brief currents into one. I have myself little doubt that if we could get the interruptions at the rate of many thousand times a minute, we should find that the primary induced current would act as a continuous current.

We can readily, by mechanical means and contrivances, interrupt the continuous current, or even rapidly reverse the poles so as to give a to-and-fro current like that of the outer coil. When this is done, it is impossible to distinguish between the action of the galvanic and that of the faradic current in producing muscular contractions. It is true that in certain diseased states of the muscle it has been asserted, and with apparent reason, that the action of the induced current is essentially different from that of the true galvanic current. Nevertheless, when the matter is closely investigated, these abnormal muscles yield us the most cogent proofs of the identity of the two currents. The consideration of this must, however, be postponed until we are more advanced in our study. Our efforts at our next meeting must be to discover how or why it is that muscular contractions are caused at the making and breaking of circuits.

ORIGINAL COMMUNICATIONS.

HYPÆMIA FOLLOWING THE OPERATION OF DISCISSION.

BY ALBERT G. HEYL, M.D.,
 Assistant-Surgeon to the Eye and Ear Institute.

HYPÆMIA, or a collection of blood in the anterior chamber of the eye, consequent upon the operation of discission when performed through the cornea, is one of those rare occurrences upon which we sometimes stumble in practice, but which,

though curious and unique, are also of great practical interest. The history of the case in which this condition occurred is as follows:

The patient, W. G., a healthy-looking German lad, aged 10 years, was brought to the Eye and Ear Institute June 22, 1874, for an opinion concerning his right eye. Two weeks previously his parents had noticed something wrong about the eye, their attention having been attracted by the white, glistening speck forming the background to the pupillary space, and due to the opaque lens. The previous history indicates that the boy has suffered more than is usual from the diseases of childhood, but apparently with little effect upon his general nutrition. There was no history of injury to the eye. The urine was normal.

On examination of the eyes, the following was noted:

Right eye.—Anterior chamber shallow, pupil moderately dilated. Lens presenting the ordinary appearance of soft cataract; a narrow band of less opaque lens-substance was noticed running across the lens for about two-thirds of the way, then bifurcating and continuing on to the equator of the lens, and marking the line of separation between its segments. Light perception and projection good.

Left eye.— $V = \frac{2}{3}$. Hypermetropia $\frac{1}{2}$ present. Oblique illumination and ophthalmoscope reveal nothing abnormal.

The boy was admitted into the Presbyterian Hospital, and on the 25th of last June the operation of discission was performed by Dr. Strawbridge, with whose permission this case is reported. The needle, as usual, was entered through the outer lower quadrant of the cornea, quite obliquely, however, owing to the very shallow anterior chamber and the capsule ruptured by a single tear. On withdrawal of the needle, we were greatly surprised to see the anterior chamber rapidly fill with blood. The usual after-treatment was observed; the blood was absorbed in about a day; no marked symptoms of irritation supervened. On examination, a few days afterwards, a synechia posterior directly downward was discovered.

The second discission was made July 12; the same phenomenon was observed; all the blood was absorbed in twenty-four hours, with the exception of a small thread-like clot lying in a chink of the partially absorbed lens, and resembling a minute blood-vessel; careful and repeated examination showed, however, that it was merely a clot-shred.

The third discission was made August 13. The hemorrhage again recurred; the blood was seen to ooze out of the iris-tissue at different points, then to coalesce until the anterior chamber was full.

October 20.—Lens seems to be completely absorbed; a large amount of capsule visible, appearing like an empty shell behind the iris and maintained in position by synechial attachments. A large hole exists in the centre of the anterior capsule. $V = \frac{2}{3}$, with convex 4. Ophthalmoscopic examination revealed some vitreous cloudiness, but nothing further, owing to the extreme restlessness of the patient. No opportunity for further examination has been afforded.

The main interest of this case hinges, of course, upon the occurrence of hypæmia evidently resulting from the operation; and the inquiry at once arises as to the source and cause of it.

1. As to its source. Undoubtedly the hemorrhage proceeded from the iris-vessels; the manner in which the blood oozed out of the iris-tissue sufficiently indicates that such was the fact.

At first thought it would be natural to suppose that the lens or its capsule, as the structure most

extensively lacerated by the operation, was the seat of the hemorrhage. Arlt* mentions having seen in a few cases blood-vessels developed upon the anterior capsule. Ruetef† describes the same thing occurring upon the inner face of the anterior capsule. When, then, these rare pathological conditions are present it would be very possible for hemorrhage to occur from the needle lacerating the vessel-coats. I have within the past year assisted Dr. Strawbridge in operating upon a case of traumatic cataract occurring in private practice, where this very thing occurred. The first three operations, in which the capsule was very lightly divided, were not followed by any event worthy of note. In the fourth operation the capsule was very freely divided, and a slight amount of blood escaped into the pupillary space, barely sufficient to tinge the aqueous humor; no unpleasant symptom followed, and the lens is now so nearly absorbed as probably not to require another operation. In the case before us the hemorrhage was too large to admit of its proceeding from lacerated capsular vessels, and, further, repeated and most careful examination failed to detect a single vessel upon the capsule; so that the blood may safely be considered to have escaped from some other tissue, and doubtless from the iris, as before stated.

2. As to the cause of the hemorrhage. Was it due to the wounding of the iris-vessels by the needle? Most certainly not: this point was carefully watched in the operations succeeding the first, making it certain that some other explanation must be given.

Was it due to escape of aqueous humor and consequent diminution of intra-ocular tension? Adolph Weber‡ has reported a case of hypæmia in which paracentesis corneæ was repeatedly performed, followed in each instance by fresh escape of blood into the anterior chamber. The exciting cause of the hemorrhage in this case of Weber's, to a certain extent, was doubtless the evacuation of the aqueous humor, but in the case before us so little aqueous humor was lost, if, indeed, any escaped, as practically to make this explanation insufficient.

Before giving what I believe to be the true explanation of this case, allow me to call attention to a few points which have a bearing upon it.

1. The origin of this cataract. The youth of the patient, the absence of any history of injury to the eye, the vitreous cloudiness, the absence of morbid change in the left eye, lead to the conclusion that the cataract was the result of inflammatory action involving one or more of the neighboring tunics of the eyeball.

2. An engorged condition of the choroidal veins readily induces hyperæmia of the iris, sometimes so excessive as, upon slightly increased afflux of blood to the part, to cause the escape of blood into the anterior chamber. Such, doubtless, was the explanation of the case of Weber's, in which the patient by the mere act of bending the body forward was able to bring on the hypæmia.

Other cases of this kind might be cited, were it

* Die Krankheiten des Auges, Bd. ii. S. 263.

† Lehrbuch der Ophthalmologie, ad loc.

‡ Archiv für Ophthalmologie, Bd. vii. Abth. i. S. 59.

necessary. Moreover, the interesting researches of Leber* have shown that after ligating the venæ vorticosæ, the principal channels of return for the iris-blood, marked hyperæmia of the choroid and iris sets in, which is followed by extensive infiltration of the tissues by red blood-corpuscles, which appear, in accordance with Cohnheim's views, to have passed through the vessel-walls. On allowing the ligatures to remain a short time, small collections of blood take place upon the iris, ciliary processes, and in the anterior chamber, dependent, probably, on the rupture of vessels of small calibre.

3. The corneal puncture in the operation of discission is followed by an almost instantaneous injection of the conjunctival and sub-conjunctival vessels, lasting generally from one to two days, indicating that the operation, simple though it be, calls forth sufficient irritation to induce an afflux of blood to the part.

Basing, then, the exposition upon these points, I may formulate it as follows: previous to his application to us, an inflammation had occurred, originating very possibly in the choroid, but involving secondarily some of the neighboring structures, with resultant disturbance of the nutrition of the lens and formation of cataract. Further, in consequence of the disturbance of the intra-ocular circulation, an engorged condition of the iris-veins resulted, sufficient upon slight afflux of blood to rupture their coats. This afflux of blood we believe to have been caused by the irritation of the discission.

There remains yet an interesting feature of this case to discuss, viz., the rapidity with which the blood was absorbed: in from twenty-four to thirty hours every trace of it had vanished from the anterior chamber. It is interesting to note the time required for blood-absorption in the anterior chamber in different cases.

Years ago,† Meyer called attention to the fact that in wounds of the eye by which the aqueous humor is totally evacuated and blood occupies its place, the latter will sometimes be absorbed in twenty-four hours.

In cases where the eye has been injured by an impinging missile, which, without penetrating the ball, has yet caused an escape of blood into the anterior chamber, it is not uncommon for it to require days and even weeks for its removal.

I have recently had under observation two cases of this kind. In one the eye was struck by the cork of a mead-bottle, which was driven forcibly out by the accumulated gas. Although the blood in the anterior chamber was small in amount, it required at least five days for its removal.

The other patient was a quarryman, who, while sledging, was struck by a small fragment of stone with such violence that, without penetration of the ball, a large amount of blood was poured out into the anterior chamber, the latter being, when I saw it two days after the accident, two-thirds full. In this case more than two weeks were required for the blood-absorption.

This variation in the time required for the blood-absorption is explained by several circumstances which hardly need be specified. There is time merely to call attention to the most important one of all, viz., the condition of the absorbing vessels as regards this fulness, and the rapidity of the fluid contained within their walls. According to well-known physiological laws, venous absorption is accelerated by increased rapidity of the blood-stream, but retarded, or even stopped, according as the current is slowed or stasis takes place. Practically, we may consider the main absorbents in all these cases to be the vessels about the sclero-corneal circle and the venules of the iris, and particularly the fine net-work of vessels overlying the iris first described by Leber, to whose investigations concerning the vascular systems of the eye we owe so much. Let us then apply this fact to the cases before us. In the case forming the subject of this paper, a passive hyperæmia of the iris dependent upon disturbance of the choroidal circulation was present. The local depletion afforded by the hemorrhage was sufficient for the time being to relieve the embarrassed circulation, and to admit of rapid absorption. In the other cases a violent active hyperæmia was called forth by the injuries, and at the time of application for relief, in one an acute iritis was in full blast, in the other a condition closely bordering upon it. The effect, then, of the hemorrhage was but momentary as regards the condition of the vessels; redistention of the vessels quickly ensued, the blood-current was slowed, and rapid absorption stayed.

The interesting features, then, of this case were the hemorrhage, sufficiently large in amount to fill the anterior chamber, resulting from the operation of discission performed through the cornea, and the rapid absorption of the escaped blood.

1535 PINE STREET.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

CASE OF MITRAL AND TRICUSPID DISEASE, WITH EMBOLISM.

Reported by Dr. JOHN GUITÉRAS.

DURING my term as resident physician to the Philadelphia Hospital, I had under my care, in the wards of Dr. William Pepper, the following case, which may prove of interest to the readers of the *Times*.

Mary W., æt. 35, temperate; admitted May 7, 1874. Family is healthy, excepting the mother, who died of heart-disease. The patient has never had rheumatism or syphilis.

Though not a strong woman, she has been working for many years at the sewing-machine, without any other symptoms than occasional slight palpitations of the heart, epistaxis, and frequent bronchial catarrhs. For years she has had an eruption of acne rosacea over the face. She has never had dropsy.

She was working up to three weeks before admission, when she had an attack of hemiplegia, with sudden loss of consciousness, and complete paralysis of the whole left side of the body. Since the attack there has been œdema of the affected side, and, though motion has been gradually returning, she cannot yet help herself at all.

* Archiv für Ophthalmologie, Bd. xix. Abth. ii. S. 145.

† Beiträge zur Augenheilkunde, S. 17, Wien, 1850.

On admission, her expression was anxious. There was difficulty in articulating, and the tongue was protruded towards the left. There was no paralysis of sensation, and the electro-muscular contractility was good. The veins of the hands were distended, and there was almost complete absence of radial pulse. On auscultation we could hear a few distinct beats, followed by a series of such rapid, abortive pulsations that they could not be counted. A mitral murmur and a clacking sound were also detected. She was ordered five drops of tincture of digitalis, with camphor-water and solution of acetate of ammonia every two hours; also nutritious liquid food and stimulants.

May 9.—In the evening the heart became more regular; by ausculting, its pulsations could be counted 130. The murmur was well defined as a double mitral.

May 10, 3 A.M.—She was attacked with a sudden severe aching pain, which, affecting first the right arm, became at last fixed in the right leg. One-quarter of a grain of morphine, administered by the night-nurse, gave no relief. At 6 A.M. the pulse (as determined by auscultation) is 165, and the respirations 30, short and moaning. The temperature in the right axilla is $91\frac{1}{2}^{\circ}$, and 91° in the left (the thermometer was kept in position for fifteen minutes). The face and extremities are cold and purplish. In the right leg the coldness extends up to the groin. This limb feels to her numb and heavy, but motion is not impaired. Her pupils are contracted, and she is drowsy. I gave her immediately an ounce of whisky, a drachm of tincture of digitalis, and half a drachm of the aromatic spirits of ammonia. She was rubbed with dry hot cloths; the limbs were wrapped in cotton, and hot pans were placed under the bed-clothing. She was ordered to take, every hour, five drops of tincture of digitalis, twenty of the solution of ammonia, with a tablespoonful each of solution of the acetate and whisky. Hot beef-tea was also given in abundance, and some milk.

Every symptom pointed to the existence of a clot in the femoral artery, except that in the dorsum of the foot, and for some distance into the femoral triangle, a pulsation was felt, which was quite puzzling.

At 5 P.M., temperature 98° . Pain was so intense that I gave one-quarter of a grain of morphine hypodermically, and she went into a sound sleep, from which she was with difficulty aroused.

At 7 P.M., pulse 150; respiration 12. Extremities are warm, except the right leg. The expirations are prolonged and snoring, and the pupils much contracted. Says that she feels better.

At 11 P.M., respirations have fallen to 9, and they are rattling. But the pulse is 137, and on waking her the respirations become easier, and they increase to 14. Ordered one-sixtieth of a grain of atropine, which was repeated in three hours.

May 11.—At 5 A.M. the digitalis-mixture gave out, and at 9 the pulse is 150, respiration 27. She feels better, and the temperature continues normal.

Evening.—Pulse 150. During the day digitalis has been given in fifteen-drop doses, but she has been vomiting. A turpentine injection was given to relieve tympany; and eighteen ounces of urine were drawn. She was ordered, for the night, injections of whisky and ammonia, with fifteen drops of digitalis every three hours.

May 12.—Pulse 165; respiration 25. There is but little pain. The right leg begins to show scattered patches of ecchymosis. The foot is paralyzed, and the toes are flexed. The pulsation in the veins of the hand noticed yesterday has disappeared. The simultaneous disappearance of all pulsation in the dorsum of the foot, and subsequently in the femoral triangle, makes me believe that the unaccountable pulsation previously felt in these two places was a venous wave.

Evening.—Respiration 24; pulse 150, not yet to be counted at the wrist. A stupe made with six ounces of the infusion of digitalis was placed on the abdomen at noon, and renewed this evening.

May 13.—She is a great deal better. Respiration 18; pulse 137 at the heart, 69 at the wrist. The toes of the right foot commence to shrivel. She takes food well.

Evening.—Pulse 150; respiration 27. Ordered again whisky in tablespoonful doses every three hours. The stupe was renewed morning and evening.

May 14.—Feels very well. The pulse is between 75 and 100, whilst the cardiac contractions number 135 to 140. The stupe was removed, and fifteen drops of tincture of digitalis were given with the whisky.

Evening.—Pulse 117.

May 15.—Pulse 108 at the wrist. It is pretty regular, and of fair volume. The heart beats 117. The dose of digitalis was now reduced to five drops every three hours.

Evening.—Heart beating 162; respiration 36. Œdema of the lungs soon developed, and she died next morning at 10 o'clock. The recent emboli found in the lungs and brain were the immediate cause of this sudden change in the symptoms.

Post-mortem, 2 P.M.—Rigor mortis well marked. Patches of ecchymosis are scattered over the right leg from the lower part of the thigh downwards. The discolored part is cold, whilst the warmth is yet retained above. The toes of the right foot are dry and shrivelled. Higher up we find bullæ and peeling of the epidermis.

Thorax.—The apex of the heart is in the fifth interspace, just outside of the line of the nipple. There is splenization of the lungs posteriorly. The anterior portion of the right lower lobe is the seat of two quite extensive patches of hemorrhagic infarctus, triangular in shape and with the base towards the pleura. They are quite recent; the two emboli not having yet become attached to the walls of the vessels. There is an extensive area of collateral hyperæmia surrounding the infarctus.

Heart.—The pericardium is normal. The viscus is dilated and hypertrophied to a slight extent. The left auricle is very much dilated. The mitral opening is contracted into a narrow funnel, which only admits the tip of the little finger. The leaflets are calcareous and very rigid. Regurgitation is easily demonstrated by the hydrostatic test. On the auricular surface of the posterior leaflet, towards its base, there is a large ulcer, probably atheromatous, as there are no evidences of acute endocarditis. Its surface is covered with a rather firmly attached, friable clot, evidently the origin of the existing systemic emboli. The tricuspid valves were simply glued together along the edges; but they were perfectly flexible, and gave rise to very little obstruction and regurgitation.

The muscular fibres, under the microscope, appeared slightly granular; but the striation was distinct.

Abdomen.—Liver small, and showing nutmeg pigmentation from red atrophy. The kidneys are the seat of congestive nephritis, evidently chronic, as shown by the induration of the tissues. One of them presents a small infarctus, commencing to break down. The right internal iliac artery is occluded by an embolus; and the mucous membrane of the bladder is congested and discolored by numerous punctated hemorrhages.

The femoral artery and its branches, as far down as I can dissect in Scarpa's triangle, are filled with a dark, rather firm clot. The coats of the vessel are discolored, but the clot is only slightly adherent. The anterior tibial at the ankle is empty.

Brain.—An embolus, similar in appearance to the deposit on the endocardial ulcer, is found at the junction of the middle and anterior left cerebral arteries. It must be very recent, as the blood has not yet coagulated about it. On the ventricular surface of the anterior por-

tion of the right corpus striatum is found a cavity about one-half an inch in diameter. It is filled with the rather thick fluid of fatty debris. Probably these are evidences of yellow softening following a condition of red softening.

The urine was highly albuminous, and deficient in urea. It contained rare epithelial casts, and some highly granular. There were also found very few hyaline and hyaline-epithelial casts.

TRANSLATIONS.

A REMARKABLE CASE OF LUXATION OF THE PENIS (Dr. Moldenhauer: *Berliner Klin. Wochenschrift*, No. 45, 1874).—Luxation of the penis on account of a loose connection between the skin and the corpora cavernosa is an accident which may occur, although it is not often met with. One case is reported by Nélaton, and mentioned by Hyrtl in his work on topographical anatomy. The patient in this case was a boy who was injured by the caving in of an embankment, the skin enveloping the penis being torn from its attachment, thus allowing that organ to slip under the skin of the scrotum. The displaced organ was in this case returned by means of a forceps introduced into the preputial opening.

The case described in this article is still more remarkable, since the penis was torn completely from its enveloping skin and thrust beneath the coverings of the abdomen.

W. K., a strongly-built farmer, aged 57, was injured on the 25th of October, 1867, by falling from his wagon. As he got up, the horse forced him against a tree, and the hind wheel of the wagon passed close in front of his body, and he found that he was severely hurt. Upon examination, it was found that the symphysis, scrotum, and penis were covered with blood, and that the scrotum was much swollen and filled with extravasated blood. There was no fracture of the bones of the pelvis, and no injury of the abdominal organs could be found. The penis, however, was much injured; the glans could not be recognized, and the whole organ hung soft and flaccid as if it had been completely crushed, but it was not very painful upon manual examination. In order to make out the condition of the urethra, an effort was made to introduce a catheter, but without success, for the instrument, after repeated trials, could only be passed as far as the symphysis pubis, where its further progress was arrested. The patient was placed in bed, and compresses, soaked in lead-water, applied to the injured parts. During the night no urine passed from the penis, but it was found that there had been extravasation of that fluid into the scrotum, which was much distended and emitted a urinous odor. As it was now evident that some operative interference was necessary, the patient was placed under the influence of chloroform, a catheter introduced as far as possible into the urethra, and an incision made down upon it through the raphe of the scrotum. The tissues were now dissected away, layer by layer, and careful search made for the urethra, in which the catheter was supposed to lie; but that passage could not be found, and, owing to an attack of hemorrhage of a violent character, further investigation had to be desisted from. On the same evening the patient was quite comfortable, the urine flowed freely from the scrotal wound, and, with the exception of the burning which it occasioned in its passage over the raw surfaces, caused him no annoyance.

On the 30th of October a new effort was made to find the urethra. The first incision was continued up to the root of the penis, and there was found to be beneath

the symphysis a cavity filled with ragged tissues and granulations, into which an elastic catheter was thrust to the extent of an inch or two, but no further introduction of the instrument was possible.

On the 6th of November an abscess formed in the abdominal walls, on a level with the spine of the ilium, which was opened the next day, discharging pus very freely, and having a fistula whence much more urine came than from the wound below in the scrotum.

On the 10th of November another unsuccessful search was made for the urethra, and then for the first time the idea arose that this must be looked for in the upper portion of the inguinal region.

A catheter was introduced into the superior opening, which passed down to the opening under the symphysis; and on the 12th an incision was made in the inguinal region, and the penis, deprived of its skin, but in other respects uninjured, was found lying imbedded in the fat and connective tissue covering the muscles of the abdomen. The entire penis had therefore been torn from its cutaneous sheath, and had then slipped up into the inguinal region beneath a portion of the layers composing the parietes of the abdomen. The urethra was uninjured: a catheter could be passed from the meatus through the organ, which had formed adhesions to the abdominal muscles up to the symphysis, where its farther progress was arrested. The glans and prepuce were dissected off, but, at the request of the patient, who stated that he only wished the penis for the function of urination, no further attempt was made to restore the organ to its normal state. That which had been regarded at the time of the injury as the crushed and bruised penis was composed only of the cutaneous envelope of that organ, the deeper portions of which had, as has been described, escaped up into the walls of the abdomen. The wound finally healed, the penis up to the glans being adherent to the muscular structure of the part and covered with skin. The glans itself was left bare and movable, so that the patient can urinate with no trouble. Erections occur from time to time, but are attended with no pain, and the man is very unwilling to have any further operative measures undertaken.

W. A.

THERAPEUTIC NOTES.

EXPECTORANT POTION.—

R Apomorphiæ chlorohydrat., $\frac{1}{8}$ to $\frac{1}{2}$ gr.;
Aq. destillat., \mathfrak{z} iii;
Acid. hydrochloric., gtt. v;
Syrupi simplicis, \mathfrak{z} i.—M.

Sig.—Tablespoonful every hour.—*Bull. Gén. de Thérap.*, October 30, 1874.

INTERMITTENT FACIAL NEURALGIA.—

R Quiniæ sulph.,
Tinct. aconit., āā gr. xx;
Pulv. quiniæ, q. s.—M.

Ft. in pil. no. xx.

Sig.—Three or four immediately on accession of the attack.

CALMATIVE EXPECTORANT.—

R Syr. acaciæ, \mathfrak{f} iv;
Antimonii oxysulphuret., gr. vi;
Ext. opii,
Ext. belladonnæ, āā gr. ii.—M.

Sig.—Tablespoonful every two or three hours in acute catarrhal bronchitis with fits of dry coughing.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JANUARY 2, 1875.

EDITORIAL.

BILLS.

IT is now the season when physicians, in corpora vili or by proxy, are engaged in making out their semi-yearly or yearly accounts; so that a few editorial comments upon professional bills may not be out of place. In this city, at least until within a few years, doctors only rendered their accounts once annually, but we trust there is not one of our readers who still cleaves to this time-honored but indefensible and injurious practice. There is no reason why doctors should wait for their money so much longer than do tradesmen. Moreover, a bill that might have been paid willingly when the memory of the recent peril and of the physician's skill and kindness was still fresh, is often paid very grudgingly when time has worn away the vividness of the impression. Again, no prudent man likes to have bills accumulating by the year unchecked; better at least once in six months to take an account of stock and square off indebtedness: therefore we believe most patients really prefer a semi-annual rendering of their accounts to an avalanche at the end of the year.

Undoubtedly, to most men it imparts more of a sense of strain to pay five hundred dollars in January than to pay two hundred and fifty at the end of each six months.

Among the lower classes very many bills are unquestionably lost by being allowed to accumulate, and we therefore note with pleasure that a few of

our physicians are beginning to send to such patients monthly accounts.

There has recently been handed to us an old medical bill, stated to have originated in one of the small Jersey towns. We are assured that it is genuine, and the peculiarities of the paper, spelling, etc., bear testimony to the same effect. We print it below in contrast with a modern model, partly as a curious relic, and partly because we think that in some respects it is a more proper and just bill than are those at present usually rendered:

1752.

Mr. Daniel Williams

To Jno. Cox Dr.

Nov. 6.	To your son John, a Nocturnal visit	o. 5.0
	Do. a Bleeding in the Arm	o. 1.6
	Do. a Bleeding in the Tongue	o. 1.6
" 7.	Do. a Purging Decoction	o. 3.6
	Eo. an Anodyne Discutient Plaister	o. 2.6
	Do. a Visit	
	Do. Six Antiphlogistick Powders	o. 12.0
" 10	Do. a Visit	o. 2.6
	Do. a Blistering Plaister	o. 2.6
" 12	Do. a Visit	o. 2.6
" 13	Do. a Visit	o. 2.6
	Do. Six Cathartick Powders	o. 12.0
	Do. an Anodyne and Discutient	
	Plaister for his Throat	o. 2.9
		2. 13.3

Jan. 24. Received the Contents of the above acct. in full.

JNO. COX.

Mr. William Daniels

To Dr. Jno. Smith Dr.

For professional services . . . \$200.00
Jan. 1, 1875.

Not long since, we heard a prominent physician say that he considered it a gross insult for a patient to ask him for a bill of items. It seems to us, however, that the only just and proper bill is one of items. Why should not the number of visits be specified? Has not the patient a right to know at what rate he is paying? Must a physician's account always remain an unknown and unknowable charge against the patient until it is rendered? The only possible object that can be gained by the physician is that sometimes he is able to charge at a rate which the patient might not willingly pay if he knew it. But is this just? Moreover, very often the patient believes that he is charged at a higher rate than he really is, forgetting how rapidly visits, when paid several times a day, mount up.

Some will say, "But a doctor is not a tradesman." True, but money is money, and business is business. True business principles are those principles which experience has evolved as being just in the

dealings of men with one another. The sooner the profession gives up all false notions of professional dignity and conducts its business relations with the people in a business-like manner, the sooner will those relations become satisfactory; and there is no principle more firmly established and more evidently just than the right of a man to know exactly what he is paying for, and at what rate.

We have always held it to be an absurdity for all doctors to charge at the same rate. Dr. Smith at thirty is not worth so much as he is at forty; and precisely as other professional men are paid,—variously, according to their reputations,—so ought doctors to be. The result of the present system is that at thirty the physician is almost starving; at fifty he is working like a galley-slave to save a little in order to pay his back debts and accumulate something for old age; whereas, if at thirty he charged two dollars per visit, and five dollars at fifty, at thirty he would have a comfortable living from the lighter cases of disease and from persons who could not afford the higher price, whilst at fifty, with no back debts to pay and something accumulated, he could live like a gentleman, earning a fair income by a reasonable amount of work. It is, however, not right to charge heavily without giving warning. Dentists in this city print upon their engagement cards, "Charges, ten dollars per hour:" shall we ever have the good fortune to see a doctor in Philadelphia bold enough and honored enough to print upon his bills, or write upon the face, "Charge, five dollars a visit"? A man may justly grumble at a very large charge which he has not expected, but no man has a right to grumble at any bill which he knowingly incurred.

BOGUS DIPLOMAS—MURDER.

FROM swindling to murder is but a few steps; especially when the swindling involves abetting those who are *nominally* swindled in becoming murderers. We suppose, therefore, none of our readers have been or will be surprised at the recent abortion so closely connected with a medical college owned and managed by the well-known and estimable Dr. Painé. Curiously enough, the abortion was produced at a house which has been the home of successive regular practitioners of excellent repute for very many years, until it passed into the hands of Mrs. Mixter and colleagues. The case, as far as made out, is briefly as follows. A young woman was brought, some few days since, from Conshohocken to this house, and an abortion produced by some one as yet unknown, from which she died last Wednesday (December 16). On Thursday

the detectives in some way got wind of the affair, and by Friday had obtained such information that they called upon the worthy doctor already mentioned, and asked if he knew anything about a body recently brought to his college. With the blandest courtesy, the learned professor stated that he did not; but, on the twain going to the institution, the janitor informed them that a Dr. F. C. Perpente, or Dr. Dubois, as he is variously named, had brought one into the college the day before. The dissecting-room was next visited, and the body was found, not as yet injected or in any way injured, but showing, it is said, very decided traces of criminal abortion. Dr. Perpente was arrested at his office about midnight the same evening. On going to Mrs. Mixter's house, it was found vacated, the bird having suddenly flown, taking seemingly only clothing and money, leaving everything else in the house just as last used. Of course Prof. Paine denies that Dr. Dubois had any connection with the institution; but, unfortunately, his name appears upon the official printed card.

CORRESPONDENCE.

NEUROLOGICAL SOCIETY OF NEW YORK.

NEW YORK, December 9, 1874.

AT a recent meeting of the Neurological Society, Dr. F. D. Lente, of Cold Spring, N.Y., read an important and lengthy paper upon "The Neurotic Origin of Disease, and the Action of Remedies on the Nervous System," of which the following is a very brief abstract.

For some years past his own experience had impressed him with the belief that in most diseases, especially those of an acute character, the morbid impression is first made on the nervous system, either directly, as in the case of the mucous membrane, where the peripheral nerves are more accessible to the immediate action of toxic remedies, or *indirectly*, through the medium of the blood; that the remedies, therefore, most likely to exert an abortive effect on disease, or, where that is not attainable, the speediest and happiest relief, are those which are supposed to act especially on the nervous system; and that our ordinary treatment, by acting in a more indirect and therefore less speedy manner, as well as by disturbing other portions and other organs of the body not involved in the morbid process, is slower, less certain, and more unpleasant in producing these curative effects.

He classed among diseases of a neurotic character "malarious" fever, and especially the intermittent form. He had no theory as to the causation of malaria to offer, but, whatever the cause may be, it seemed to him to act primarily on the nervous system, and its morbid energy to be most expended in its assaults on that system. The

evidence advanced, both from the arguments and data of those adopting a certain theory of causation and of those virulently opposing it, alike tends to support this idea. Thus, it is admitted that repose, and especially repose at night, renders the body most liable to miasmatic influence, while exercise, even in what is supposed to be the hot-bed of poison, is preventive. Every one knows how much more liable we are to "take cold" when sleeping, or even when in a drowsy state, and especially at night, unless the body has an additional covering, and how great a protection exercise is. In both cases the nervous system is more impressible in the one state than in the other. Exercise and occupation in all epidemics of whatever kind are the great preventives. Indolence and fear, causing greater nervous impressibility, are our worst enemies. The sudden onset of the disease points to the primary affection of the nervous system.

He also instanced articular rheumatism as an example of a neurosis. Dr. J. R. Mitchell attempts to prove it a neurosis, and refers its phenomena to a spinal origin. In a case of pruritus reported in the first number of the *Archives of Dermatology*, by Dr. Beard, for Dr. Kinsman, of Ohio, the latter remarks, "The moment the current (of electricity) is passed along the spine the pruritus ceases." Dr. Beard also reports a case of herpes zoster frontalis for Dr. Bulkley, cured by galvanism. The spinal origin of many cutaneous affections is well established. It is important, in all cases of very obstinate eczematous or bullar diseases, to pay special attention to the influence of the nerve-centres and of possible nerve-lesions as a cause.

The peculiar effects of cathartics, especially where they are given for their so-called derivative action, can only be explained by this reflex influence on the brain and its vaso-motor vessels rather than by unloading the abdominal vessels, since the impression felt in the brain is almost instantaneous. This is felt sometimes even after an ordinary evacuation, or even after the passage of a gas.

Dr. Lente then proceeded to review the physiological effects of the more important remedies, among which he mentioned atropia, ergot, strychnia, opium, conium, physostigma or ergotine, iodine, calomel (in sedative doses), quinine, phosphorus, amyl nitrite, the bromides, the anæsthetics (by inhalation), digitalis, and electricity.

We cannot review these remedies in detail, but shall only reproduce a few of the author's thoughts here and there. He thinks that comparatively few physicians, taking the whole country, have any definite idea of the value of digitalis as a heart-tonic. The error has probably arisen from noting its effects on animals in toxic doses. In such doses "it lowers reflex action, and induces lassitude, prostration, muscular tremblings, and sometimes convulsions." It produces such an energetic action on the heart, if pushed too far, "that the ventricles become white as the last drop of blood is squeezed out of them." Finally, if pushed to its poisonous effect, the heart is arrested in systole (H. C. Wood).

In regard to the action of the bromides, there is one

rather wide-spread error which tends greatly to circumscribe their usefulness, namely, that in cases of cerebral anæmia, or in a condition of the circulation in which it may be supposed that this exists, they are useless, and even injurious. Now, the result of experiments with these drugs on animals, carefully collected, as well as those of clinical experience, go towards demonstrating the fact that the least important of the effects of these agents is their vaso-motor influence; that their most important action is in controlling and, if pushed far enough, almost obliterating reflex action,—first, by a direct effect on the nerve-centres, the medulla oblongata, and the cord especially; secondly, on the peripheral nerves: that is, blunting the susceptibility of the latter to painful impressions, and also the susceptibility of the cord as to those impressions. This important virtue of the bromides is well exhibited in preventing sea-sickness and the vomiting induced by anæsthetics, and the unpleasant effects of opium and quinine, which clinical experience has recently taught us. This property has special applicability in the treatment of certain functional diseases of the heart.

As regards the use of the active neurotics, it is certain that most of the failures and disappointments often complained of have resulted from inefficient doses. We may give this as a rule of action, that the drug cannot be said to have had a fair trial unless it has relieved the symptoms or produced its toxic effects. With regard to the bromides, strychnia, opium, atropia, physostigma, this is especially the case; and in very dangerous cases the toxic effects need often to be very pronounced. The doses, in fact, are as various as the temperaments and idiosyncrasies of the patients. For an account of the employment of large doses of physostigma, reference was made to the last number of the *London Practitioner*. The patient, a physician, took, in four days, of the solid extract of a reliable manufacturer, sixteen, forty-eight, fifty-seven, and seventy-two grains at one time; serious paralysis was induced, but the urgency of the disease, tetanus, required a perseverance with the drug.

ODONTOLOGICAL SOCIETY OF NEW YORK.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—This body, comprising the representative men of the dental specialty of New York City, has just concluded a meeting of three days' duration, during which were presented and discussed a series of elaborate essays such as would be a credit to any professional body that might assemble in the country. At this meeting were collected as guests of the Society quite a number of the prominent teachers connected with the different dental colleges, together with gentlemen from different sections of the United States, most distinguished in the various departments of the specialty.

The subject of professional education and practice, which was discussed with unusual warmth, exhibited

markedly the inclination entertained for a wider sphere of work, and portrayed plainly enough that the conversion of the dentist into the oral surgeon is only a question of time.

The ranks of the common mother-profession would receive a valuable addition in such gentlemen as compose the New York Odontological Society, and we most cordially unite with a speaker from your own city in trusting that the day is not distant when all shall be children of one alma mater, working in harmony and with a mutual interest for the common good of suffering humanity.

M. D.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

THURSDAY, NOV. 12, 1874.

CANCER of the uterus.

Dr. JOHN H. PACKARD presented the specimen, derived from a woman aged 49, whose history has been published in the *American Journal of the Medical Sciences* for July, 1874, as "*A Case of Lumbar Colotomy for Obstruction of the Rectum by Cancerous Tumor of the Uterus.*" The object of the operation was the temporary relief from the obstruction, and by its means much comfort was secured to the patient while she lived, which was thirty-four weeks.

Dr. JOHN S. PARRY desired to know some further particulars of the case.

Dr. PACKARD said that when he first saw the patient her vagina was filled with a growth, and an examination of the uterus by the speculum was difficult, on account of the extreme vascularity of the mass distending the vagina. On introducing the finger into the rectum, it was arrested in a short time by a mass which appeared to block up the pelvis and make any further examination of the pelvic organs difficult. The operation of lumbar colotomy was performed, to relieve her from the effects of impaction of the feces. He could not say whether the cancer originated from the pelvic organs or the vagina.

Dr. PARRY asked whether any growths were removed from the vagina.

Dr. PACKARD replied that there had not been any removed in this manner. He further said that the patient lived thirty-four weeks after the operation in comparative comfort, all the horrors of lumbar colotomy, as usually described, having been avoided. There was no odor about the patient, nor any difficulty in keeping her person clean.

Dr. PARRY said he had made a somewhat hasty examination of the specimen. Upon passing the finger up the vagina, which has not been opened, it felt perfectly healthy. The posterior portion of the cervix appeared to be absent; but he could not detect any destruction of tissue with the finger. The external os admits the finger, which may be carried as far as the internal os, where it meets with a constriction. Behind the uterus, between it and the rectum, there appears to be a tumor, which possesses some of the characters of an inflammatory deposit. If cancer of the uterus, it was different from any other he had ever seen. It reminded him of a specimen which had been presented at the Obstetrical Society, as cancer of the uterus, in which he had suspected an error of diagnosis, and in

which careful dissection and microscopic examination proved that the condition was one of pelvic peritonitis.

Dr. PACKARD said he would be very glad to have the specimen referred to a committee for examination. He had spoken of it as cancer, because, in the first place, there was a distinct, readily-bleeding mass in the vagina, which made the examination difficult and rendered the use of the speculum impossible; in the second place, if there ever was a patient who exhibited the so-called cancerous cachexia, this certainly was such a one; finally, notwithstanding the relief to certain symptoms by the operation of lumbar colotomy, the disease swept on without any abatement, and the whole history of the case was that of one which runs its course without the possibility of any treatment materially influencing it.

Dr. JAMES TYSON rose to refer to a subject which had already been much discussed in the meetings of the Society,—that of cachexia. He said that it seemed to have been pretty well determined that the condition commonly called *cancerous cachexia* was one which was very often absent in cancerous disease, and which was sometimes observed when nothing like cancer was present to account for it; that while cancer only involved those organs which were not highly vital, *i.e.*, not closely essential to life, as is the case with many external organs, and perhaps some of the viscera, as the bladder, its presence did not result in the production of the so-called cachexia, while, when organs so important to life as the lungs or liver became involved, the phenomena sooner or later appeared. He inquired of Dr. John Ashhurst, Jr., who had always taken much interest in the subject, whether, consistently with these facts, this was not a case in which we would not have expected the cachexia to attend.

Dr. ASHHURST said that he thought that "cachexia" could no longer be considered an important symptom of cancer, it being well known that cases of *external* cancer might run their course to a fatal termination without any development of cachexia, while, on the other hand, this condition might occur in connection with visceral disease other than cancerous. He referred, in illustration, to a case reported by himself to the Society,* one of primary cancer of the bladder, in which the development of the so-called "cancerous cachexia" coincided with the occurrence of pulmonary disease, which, after death, was found to have been of a non-cancerous nature. The notion that any definite cachexia attended the growth of cancer should, he thought, be given up, and nothing but a careful microscopic examination allowed to determine as to whether any particular tumor was or was not of a cancerous character. In fact, since Virchow and other modern pathologists now described under the name of *sarcomata* many growths formerly regarded as cancerous, the diagnosis of these growths had come to be purely one of minute anatomy,—the *sarcomata* exhibiting cells in constant relation to an intercellular substance, but the *carcinomata* showing no such relation, while mixed growths were designated as *carcinomatous sarcomata*. If, however, the term *cancer* was used in a clinical sense, as merely equivalent to malignant tumor, it would, of course, include many growths besides the *carcinomata* of anatomical classification.

Dr. PARRY said that, in illustration of Dr. Ashhurst's remarks, he had under his care, at the Philadelphia Hospital, a case of cancer of the uterus, which had destroyed the whole of the anterior wall of the vagina and the posterior wall of the bladder, as well as involving the rectum and producing stricture of that organ. The patient had had profuse hemorrhages during the last few months, and yet there was no evidence of

* Trans. Path. Soc. Phila., vol. iv. p. 157.

cachexia. He had frequently seen cancerous disease run its course in organs not necessary to nutrition, without manifesting these phenomena. In the same ward with the woman whose case he had just related, was another, who came into the hospital with a huge pelvic abscess discharging into the vagina, and accompanied by profuse metrorrhagia. When he first saw her and heard her history, he thought her disease cancerous, and he was led to believe it on account of the cachectic appearance of her skin.

Dr. JOSEPH G. RICHARDSON said that, in connection with this case, he would mention that of a patient of his who died of primary cancer of the ovary, but who would never consent to an examination. As he visited her day after day, he observed, six weeks before her death, the condition formerly described as the "buck-wheat-cake" hue, in a small spot just between the eyes. This patch gradually spread, and three weeks before her death the cachectic appearance as well marked over the whole face as he had ever seen it in his life.

The specimen was referred to the Committee on Morbid Growths, which reported December 11, 1874, as follows:

"Your committee find the tumor presented by Dr. Packard distinctly alveolated, therefore carcinomatous. Long club-shaped cylinders filled with epithelial cells are seen permeating the muscular layers in every direction: hence the variety is *epithelial carcinoma* or *carcinosarcoma*."

"The same histological features are possessed by the rectal masses and those strewn throughout the body of the uterus and appendages. Greater part of the cervix has been destroyed; whether it or the rectum was the primary seat of the disease remains to be decided upon by the special committee."

Dr. PACKARD presented also a tumor of the thyroid gland, removed by him on the same morning from Mrs. M., æt. 42, who had suffered from it ever since the birth of her second child, nineteen years previously. Within the last year it had been increasing rapidly in bulk; she had suffered much annoyance every winter from it, as well as whenever she took cold or upon making any exertion. The operation was done at her earnest desire, and was in itself not difficult, although the hemorrhage was profuse immediately afterwards and required very prompt and energetic action. The tumor was presented in order that it might be referred to the Committee on Morbid Growths for examination.

(NOTE.—The patient progressed favorably until the seventh night, when there was slight bleeding from the effect of an irritative cough. Congestion of the lungs, which had been previously somewhat troublesome, now became extreme, and she died twenty-four hours subsequently.—P.)

The tumor was referred to the Committee on Morbid Growths, which reported Dec. 11, 1874, as follows:

"The tumor of the thyroid gland removed by Dr. Packard is an ordinary *struma hypertrophica*, with commencing colloid degeneration. The glandular follicles of the parenchymatous substance have evidently been undergoing active proliferation and segmentation, as shown by the budding-out of small glands from the walls of the larger parent follicles. Many of these follicles contain, besides their epithelial lining, a thick, amber-colored, gelatinous or colloid substance. The size of the distended follicles is very variable: in no place, however, have they coalesced so as to form large cystic cavities. The blood-vessels of the fibrous septa are very abundant and large, but the connective tissue itself is only developed in a very subordinate degree,—not sclerosed. In many places the net-work of vessels had a peculiar glassy appearance, their walls being unusually thick, and, upon the addition of iodine, yielding a distinct amyloid reaction. We have, therefore, a

struma gelatinosa, with partial amyloid degeneration of the blood-vessels."

Myxomatous neuroma of the brachial plexus.

Dr. R. M. BERTOLET presented this tumor, which was removed, Nov. 1, at the necropsy of a woman aged 67, who died from pulmonic phthisis. This growth, considerably larger than a fist, completely filling up the right axilla, never gave rise to any pain or decided inconvenience. It was several years in attaining its present size; the integument remaining freely movable over it, while its soft and fluctuating contents were suggestive of a cyst.

Upon dissecting out this fusiform growth, it was found that the nerve-sheaths formed a continuous covering over it, the nerve-bundles and individual fibres being widely separated and spread out over the tumor, and partially imbedded in it. When cut into, it presented a soft, trembling, gelatinous mass, yellowish-white in appearance; the more vascular portions having a reddish tinge and firmer consistence. In the fresh condition the substance of this tumor was not only soft and yellowish, but translucent; the alcohol has rendered it slightly opaque and more solid.

Microscopically, the growth is characterized, as can be seen in the accompanying slides and drawings, by large *stellate* and *spindle cells*, freely anastomosing with one another. These cells are imbedded in a structureless, hyaline basis-substance, which is rendered cloudy and granular upon the addition of acetic acid and other reagents. Septa of connective tissue are only sparsely developed. At points, large oil-globules are met with; at others, again, small round mucoid cells fill up the meshes; but the bulk of the growth presents the above pure type of myxoma.

Histologically, there can be no doubt that we have here a tissue analogous to embryonal connective tissue, which has sprung from the perineurium of the brachial plexus. It is not a neuroma in the true sense of the word, the term being admissible only in so far that it is indiscriminately applied to all neural tumors. Even the painful neuromatous growths so often occurring after amputations are generally mere fibromas, an actual new growth of the nerve-fibres themselves being exceedingly rare. Most of the spindle-shaped tumors found along the trunks of the nerve belong to the class of myxomas, as has been long ago pointed out by Virchow. When thus situated they are often multiple, and give rise to neuralgia and lancinating pains; yet they may fail to evoke any of these symptoms, as in this instance. Virchow mentions a case in which a painless myxomatous growth seated upon the peroneal nerve was mistaken and opened for a hygroma.

Myxomatous neuromas, like the myxomatous growths occurring in other portions of the body, are comparatively benign, with perhaps even still less tendency to metastasis. After the peripheral nerve-trunks, the next most frequent site for these neoplasms is the spinal cord; while in the brain and its meninges they are the exception, the pathological production of the cerebral neuroglia being the glioma.

Multiple myxoma of the spinal cord.

Dr. BERTOLET also presented these growths, which were discovered accidentally upon the cord of an adult of whom no clinical history seems ever to have been obtained. They are five in number, scattered along the length of the cord, both upon its anterior and posterior surfaces. The largest measures nearly half an inch in length, but only a few lines in thickness. The microscopic appearances do not differ materially from those of the preceding specimen.

The PRESIDENT asked what was the relation of the nerve-fibres to the tumor.

Dr. BERTOLET replied that the nerve-filaments were spread over the surface of the tumor first presented.

The PRESIDENT said that about a year ago he had the opportunity of studying carefully a myxoma removed from the right supra-spinous fossa. It was not nearly so large as this specimen, but presented the same microscopic characters.

The point of origin was not determined, but it was not connected with any twigs of nerves, but appeared to occupy a superficial position in the subcutaneous cellular tissues, being invested by a delicate fibro-cellular sheath.

The PRESIDENT remarked upon the presence of Dr. J. J. Woodward, of the army, who had been one of the original members of the Society and most active in its proceedings, and invited him to make any remarks which his large experience in the histology of morbid growths might suggest.

Dr. WOODWARD said that it would give him great pleasure to say something on the subject, if he thought he could add anything to what had been so well said by the members who had already spoken. He assented to the opinion that these growths are rare; certainly he had seen comparatively few of them. The only point not mentioned by previous speakers which it occurred to him to mention was the occasional association of myxoma with genuine carcinoma in the same growth. Not long since, he had examined such a tumor at the Army Medical Museum. It was from the parotid region, and for the most part consisted of typical myxomatous tissue, with beautiful stellate cells. A portion of the growth, however, had the anatomy of carcinoma, and presented a true alveolar structure, the alveoli being stuffed with masses of granular cells with large nuclei, which adhered together without any intercellular substance. Several of the microscopical sections preserved exhibited both these forms of morbid tissue in different portions of the same section.*

Perforation of vermiform process by ulceration, and resulting acute diffuse peritonitis.

Dr. W. H. WARDER presented the specimen, for Dr. EDWARD STONE, from W. B., æt. 24 years, married, temperate, and who had always enjoyed good health previous to his last illness. Dr. S. was called to see him on the evening of Oct. 24. He said that he had had "cramps" all day, for which the ordinary domestic remedies were taken,—ginger, brandy, etc.,—but without much relief. His bowels had been moved twice that day, and he had had nausea and some vomiting during the afternoon. He was suffering at the time of the visit from severe pain in the umbilical region, which came on in paroxysms every few minutes, and was not relieved by pressure, although the belly was not sensitive to pressure. Tongue slightly coated; pulse 80, rather small and weak.

Oct. 25, morning.—Considerable vomiting during the night. Pain has been relieved, but considerable tenderness has been developed generally over the abdomen, not sufficient, however, to prevent him from leaving his bed to go down-stairs. The soreness is most marked between epigastrium and umbilicus. No *tympanitis* whatever. Has no pain, excepting when turning in bed, and the position of lower extremities has no influence on it. Tongue heavily coated in the centre. Respirations hurried and somewhat superficial; pulse 98, small and weak, and considerable heat of skin.

Oct. 25, evening.—Vomiting has ceased. Although "he feels better," and is comfortable while lying still, he is much weaker. Pulse running 120, and very small

and compressible, with marked heat of skin. Respiration entirely thoracic. No tympany, the belly looking natural as before. Lying on his back, with limbs extended. Bowels have not been opened since yesterday. Retention of urine; catheter was passed, and about a half-pint of urine withdrawn, normal in appearance.

During the night he sank rapidly, and died at 7 A.M. Oct. 26.

(After his death, Dr. Stone learned that he had been ailing and had had "pain in his stomach" for several days before he saw him.)

Autopsy, twenty-six hours after death.—*Abdomen* only examined. Rigor mortis well marked. Abdomen flat. Signs of violent acute peritonitis, involving the whole sac. *Omentum* swollen and injected, and glued down by recent adhesions to surrounding viscera. *Intestines* congested and matted together, covered here and there with patches of soft yellow lymph. In right iliac fossa, the caput coli and lower portion of ileum were more firmly adherent, and were thickly covered with lymph. The vermiform appendix was firmly adherent to an adjacent coil of intestine by its extremity, and was about the diameter of the index-finger, patulous, and full of semi-fluid fæces. Near its base a small ulcer was found to have perforated the bowel. The mucous membrane of the intestinal canal elsewhere was not ulcerated. No foreign substance was found, and the fæces in the colon were healthy. Peritoneal cavity contained about one-half pint of sero-purulent fluid.

The PRESIDENT said these cases were of interest and importance, in consequence of their being much more frequent than is usually acknowledged, on account of their fatality and the obscurity of their diagnostic symptoms. In this unfortunate case one would suppose from the size of the appendix that there had been latent disease of a chronic inflammatory character, so that the true period of beginning of the typhlitis was not observed, while the disease was rapidly going on to perforation. Indeed, typical symptoms can scarcely be said to have manifested themselves. The case was also of interest from the fact that there appeared to be no foreign body or hardened secretion of mucus occupying the appendix, as is usually the case, though, from the fact that there was still free communication between the appendix and the cæcum, such a body may have existed and have escaped into the large intestine.

In answer to a question by Dr. HARRISON ALLEN, the President further said that in his own observation the position of the ulcer had seemed to be a matter of indifference. He had seen it occupy the extremity of the appendix, and all intermediate points between this and the cæcum. He had seen from two to four ulcers with two perforations. The ulcers often arise in connection with some distinct irritating particle which is at times attached at the site of the perforation, and seems to have been the determining cause of the ulcer at that point. In cases where the opening between the appendix and the bowel is closed by adhesions, the cavity of the appendix is apt to be greatly distended by the accumulation of pus. In cases where the communication with the cæcum is retained, the irritating foreign body may escape from its position into the large intestine, and thus be overlooked. But it would seem that usually the seat of the ulcer was quite accidental, perhaps depending in many cases on the position where the foreign body lay in contact with the mucous membrane. In cases of typhlitis which result from other causes than the presence of irritating foreign bodies, whether of inspissated mucus or fæces, or bodies more strictly foreign, such as fruit-seeds, the appendix itself is not so apt to be the seat of the disease as the walls of the cæcum, and the attack is apt to assume rather a different form.

* Dr. Woodward subsequently informed the Recorder that the tumor referred to is No. 6320, Surgical Section, Army Medical Museum. It was from the right cheek of a lady about 55 years old, and occupied the site of the parotid gland, which was apparently atrophied. It was excised November 10, 1873. Nos. 6459 to 6470, Microscopical Section, Army Medical Museum, are thin sections of this tumor, stained with carmine and mounted in Canada balsam.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

W. S. W. RUSCHENBERGER, M.D., in the chair.

WEDNESDAY EVENING, NOVEMBER 4, 1874.

DR. WILLIAM S. FORBES read a paper on "A New Operation for Certain Cases of Cleft Palate and Bifid Uvula."

The new operation is adapted to cases in which each half of the split uvula and velum is large and thick, and in which the cleft does not extend entirely through the velum up to the hard palate.

It consists in making an incision from a little below the middle of the right half of the uvula, on one side, and carrying the bistoury up to a point above the arch of the fissure, and then, turning the bistoury, to bring it down to a corresponding point in the uvula of the opposite side.

The column of flesh on either side of the fissure, now liberated by this incision, turns on its attached pedicle, or falls from the arch, leaving a long uvula with an oval opening in its base.

In the first case, a few days after the operation granulations sprang up, and the parts contracted. A day or two later, when the upper part of the wound began to widen, the tensor and levator palati muscles were divided with a double-edged knife, as recommended by Sir W. Fergusson, all tension being thus removed. The upper edges of the opening then approached the median line; and, under the application of a little nitrate of silver, cicatrization and narrowing of the entire opening rapidly ensued.

This case eventuated in a cure, as did also a second one in which a similar operative procedure was practised.

Dr. JOHN ASHHURST read a report of a *fracture of the neck of the scapula* which occurred in a boy five years old, who had been struck by a falling door, in front of the right ear and on the right shoulder. When he saw the case, on the third day, there was a good deal of pain and tenderness, with moderate swelling, but very little deformity. Careful examination showed that there was no fracture of either the humerus or the clavicle, nor of either the acromion or the coracoid process; but the latter appeared to move with the head of the humerus, and, by grasping the neck of the scapula between the fingers laid upon the shoulder and the thumb thrust firmly into the axilla, deep-seated crepitus was elicited upon the arm being forcibly rotated. The treatment consisted in maintaining the arm in the "Velpau position" by means of broad adhesive strips and a bandage, and a satisfactory cure was effected in the course of four weeks.

GLEANINGS FROM OUR EXCHANGES.

THE STATE OF THE PUPIL IN CHLOROFORM-ANÆSTHESIA AS AN INDICATION OF DANGER (*Atlanta Medical and Surgical Journal*, November, 1874).—M. Budin, interne of the hospitals, in examining with care all the details of chloroformization, with the end of discovering some sign which may guide the surgeon in its administration, has observed that there exists a certain relation between the state of the pupils and the more or less profound anæsthesia of the subject. . . .

1. There exists in the surgical anæsthesia produced by chloroform a constant relation between the state of the pupil and the period of anæsthesia.

2. During the period of excitation the pupil is dilated.

3. This period passed, the pupil contracts; its atresia,

very marked for several minutes, accompanies, in general, complete anæsthesia.

4. Dilatation of the pupil supervening during an operation indicates in general that anæsthesia is less profound, and that return to sensation is near.

5. The state of the pupil may then serve as a guide in the administration of chloroform.

6. During operations of long duration, if the patient is to be kept completely insensible and immobile, the pupils must be kept constantly contracted.

7. Finally, efforts at vomiting may produce dilatation of the pupils, dissipate the insensibility, and awaken the patient; they annihilate in part the effects of anæsthesia.—*Progrès Médical—Gazette des Hôpitaux*, October 1, 1874.

FRACTURE OF THE STYLOID PROCESS OF THE ULNA (*Edinburgh Medical Journal*, November, 1874).—Mr. Neil Macleod reports the case of a man, æt. 32, who disabled his right hand in a fight, by a blow on his antagonist's face. He presented himself for treatment, complaining of pain near the wrist, and inability to use the hand. The fore-arm was between pronation and supination, and the disabled hand was supported on the other. On comparing with the other hand, there was no antero-posterior or lateral displacement, but there was slight ulnar flexion. On fixing *both* bones of the fore-arm, and moving the hand and wrist, no crepitus could be elicited. The same result followed fixation of the *radius alone*; but in fixing the *ulna alone*, a little above the styloid process, distinct crepitus was obtained on moving the hand and wrist antero-posteriorly. Further, no crepitus could be obtained by manipulation of the lower end of the ulna alone; but on fixing the wrist and lower end of the radius with one hand, with the other the distal end of the ulna could be pushed from its normal position forwards or backwards—more especially the latter.

Diagnosis.—Fracture of the styloid process of the ulna, and separation of the triangular cartilage.

INFECTION BY SYPHILITIC SEMEN (*New York Medical Journal*, November, 1874).—Dr. Isaac Smith, Jr., reports the following case, which he believes disproves the assertion of Professor Bumstead that it has never been proved that a female may, without becoming pregnant, contract syphilis through the semen of a syphilitic male, he having at the time no syphilitic lesion. A gentleman who had had chancre, secondary eruption, bubo, and engorgement and suppuration of the cervical glands, married after he had apparently been in good health for about twelve months. Soon after, his wife had prolapsus uteri, and a chancre was discovered upon the os. This was treated, and healed kindly. Six weeks later she had a specific fever, and as that subsided, a secondary eruption appeared, which soon yielded to treatment. Six months afterwards, the man had urethral chancre, while his wife was suffering at the same time from engorgement of the os uteri, with uterine leucorrhœa. They were relieved of these troubles, and since then have had perfect health. The woman has never been pregnant, and has never run past her time. The family is of the highest respectability.

EXTRA-UTERINE PREGNANCY (*The Boston Medical and Surgical Journal*, November 12, 1874).—Dr. E. W. Sawyer reports the case of a married woman, who had had five children, and in whom all the usual symptoms of pregnancy came on, and persisted until the third month, when colicky pains began to trouble her and continued throughout her gestation.

At the end of the ninth month regular labor-pains were developed, but subsided after two days. The head of the child could be felt high up in the pelvis; there

was no dilatation of the os uteri. Twelve days later, regular pains set in, and continued for a day, at the end of which all motion ceased, after a most violent action of the child. She then had slight hemorrhage for three months, but for some time afterwards her menses returned with the strictest regularity. It being decided to operate, an incision was made through the abdominal walls, and the cyst containing the child was removed. The patient did not rally, but died twenty hours after the operation.

MISCELLANY.

A NEW THERMOMETER.—A. Jaksch, of Kreibitz, Bohemia, proposes the use of glycerin thermometers, made as follows: An ounce bottle is two-thirds filled with glycerin of any desired color, and the bottle placed in a freezing-mixture of sal ammoniac, saltpetre, and water, so as to cool the liquid to 32° F. A glass tube twelve to fifteen inches long is passed through a good-fitting cork, so as to dip nearly an inch into the glycerin. The cork is inserted in the neck of the bottle and rendered air-tight with sealing-wax or a cement of varnish and chalk, and the thermometer is then ready to be graduated. On inserting the cork, the liquid rises in the tube a few inches.

The bottle is placed in melting ice, and the level of the liquid marked 32°, if the scale is to be Fahrenheit's. It is next placed in warm water, say at 132°, and this point marked. The space between these points is divided into one hundred equal parts, and this division carried down to the Fahrenheit zero, and upward to the top of the tube.

DECLINE OF HOMŒOPATHY ABROAD.—"It is not to be wondered at that we now obtain few open accessions to our ranks; that the vacancies occasioned by deaths are scarcely filled up by new converts. Apparently homœopathy is almost at a stand-still as regards professed adherents in this country. The 'Homœopathic Directory' of this year contains few new names of practitioners that were not in the 'Directory' of last year. Nor is it surprising that we have renegades. . . .

"The paucity of recent conversions to homœopathy in other countries of Europe has been admitted and commented on by the homœopathic periodicals, and is, I think, satisfactorily accounted for by what I have stated."—*Dr. Dudgeon's Presidential Address at the British Homœopathic Congress, June 4, 1874.*

VIOLATION OF THE PHARMACY LAW.—Three retail druggists were recently fined one hundred dollars and costs for violation of the act of Assembly which provides that no person shall carry on in this city the business of retailing drugs, chemicals, or poisons, or of putting up physicians' prescriptions, without first obtaining a certificate of competency from a Board known as the Pharmaceutical Examining Board, composed of competent druggists, and appointed by the Mayor.

It will surprise many members of the profession in this country to be told that elephantiasis græcorum exists in Canada. According to the *Toronto Globe*, there

cannot be any doubt but that in a part of the Dominion near the mouth of the Miramichi River there have been lepers for the last eighty or ninety years.—*The American Medical World.*

THE death is announced of Dr. Edward Smith, of London, well known to the profession by his papers on food, alcohol, phthisis, prison-diet, etc., etc.

NOTES AND QUERIES.

REMARKABLE CASE OF MEGACEPHALUS—RECOVERY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I was hastily summoned on the morning of the 27th to see Mr. J., æt. 40. He had been to a Thanksgiving dinner the day before, and to his club in the evening, and never felt better.

Symptoms.—Face flushed, headache intense, intellect obtuse, tongue furred and swollen, speech thick, skin hot and dry, odor frumentous and nicotic, pulse 90, temperature 102°, eyes looked so bad that I thought it best to send for the oculist, Dr. N. Found diplopia, muscæ, V $\frac{1}{2}$ 0, media clear, no choking of disk, fundus normal.

R. Pil. hydrarg., gr. x, at once;
Sp. mindereri, ℥ss, q. h. s.

Evening.—Headache somewhat better, but worse in other respects; pulse 95, temperature 100°. Spasmodic jerking, slight delirium, much tremor. Consult with Dr. M. (nervous disease) at 9 p.m. No paralysis; sensibility normal; areas all right, as tested by the pricklers. Patient's vision had improved $\frac{2}{3}$ 0; saw a joke: said he thought he was getting stuck.

R. Galvanism, t. d.
Magnesii sulph., ℥ss at a dose.

28th.—Much better. Pulse 75, temperature 98°. Bowels have been moved freely. Urine free, but cloudy. Sent a bottle of it to Dr. T. (renal specialist). Warm bath and chicken broth. Suspended galvanism.

29th.—Recovering rapidly. Discontinued treatment.

Met patient on Broadway not long after this; said he had got the bills, and looked very savage. Thought he was going to have another attack, and advised him to go to Europe. Said I had a young medical friend who would accompany him for expenses and a small consideration.

He said he thought I did not look very well myself, and told me to go somewhere—I don't know where the place is exactly, but remember thinking it was very hot, and how ignorant non-medical men are of climate and geography.

D. F. L.

NEW YORK, December, 1874.

At the Annual Meeting of the New York Society of Neurology and Electrology, held Dec. 21, the following officers were elected for the ensuing year: *President*, Meredith Clymer, M.D.; *Vice-President*, John C. Dalton, M.D.; *Councillors*, Austin Flint, Jr., M.D., D. B. St. John Roosa, M.D., Edward G. Loring, Jr., M.D., William H. Draper, M.D., William T. Lusk, M.D.; *Corresponding Secretary*, John J. Mason, M.D.; *Recording Secretary and Treasurer*, N. B. Emerson, M.D.; *Curator*, Edward G. Janeway, M.D.

Attest: ALFRED L. CARROLL, M.D., *Secretary*.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

DR. D. Hayes Agnew, late President, will deliver the Annual Address before the Society, Wednesday, January 6, 1875, at 8 o'clock P.M., at the Hall of the College of Physicians.

The medical profession in Philadelphia are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 22 TO DECEMBER 28, 1874, INCLUSIVE.

WINNE, C. K., ASSISTANT-SURGEON.—Assigned to duty at Sidney Barracks, Nebraska. S. O. 185, Department of the Platte, Dec. 17, 1874.

ABADIE, E. H., SURGEON.—Died at St. Louis, Missouri, December 22, 1874.

SATURDAY, JANUARY 9, 1875.

ORIGINAL COMMUNICATIONS.

A CASE OF INTRACRANIAL TUMOR, WITH MICROSCOPICAL EXAMINATION.

BY CHARLES S. BULL, M.D.,

Ophthalmic Surgeon to Charity Hospital, Assistant-Surgeon to the New York Eye Infirmary, Microscopist to the Manhattan Eye and Ear Hospital.

THE patient whose history will immediately follow was an inmate of the City Insane Asylum, under the care of Dr. A. E. Macdonald, Physician-in-Charge, and Dr. J. G. Kiernan, Assistant-Physician, to whose courtesy and kindness I am greatly indebted for the pathological specimen and the accompanying history. Unfortunately, the history is somewhat scanty, being deficient on some important points antedating his admission to the institution.

Anton B., 40 years of age, a native of Germany, became an inmate of the New York City Asylum for the Insane some time in February, 1874. We have no record of any premonitory symptoms, except a statement that the man's vision began to fail about six months previously. There is no history of any syphilis, but no information could be gained from the patient, as the history states that during Dr. Kiernan's service he did not speak. There is some doubt whether the patient had any vision when admitted to the asylum, but shortly after this he became completely amaurotic in both eyes. During his sojourn in the institution his hearing remained normal, and there was no disturbance in the sense of smell, which seems almost incredible when we come to consider the location of the tumor. There was no strabismus, no ptosis, and, in fact, no disturbance of function of any of the nerves supplying the eyeball and its appendages, except the branch of the motor oculi which is distributed to the sphincter of the iris. The pupils of both eyes were dilated and immovable when he entered the asylum, and remained so until just before his death, when they contracted. The variety of insanity under which he labored was melancholia, accompanied by delusions of a depressing character. There was no cataract in either eye, but, unfortunately, no ophthalmoscopic examination was made. At first sight there appeared to be no disturbance in the power of co-ordinate movements, as the patient could walk; but a closer examination showed that if he were allowed to remain in one position he soon fell over. At no time were there any symptoms of paralysis present. He was suddenly attacked by vertigo, five days before he died, and an examination of his urine showed traces of albumen. He died from pleuro-pneumonia and uræmia, though the coma was not strictly uræmic in character. At the autopsy, both cerebral lobes were found much softer than normal, the cerebellum seemed somewhat reduced in size, and the pons Varolii was found to be infiltrated with a structure of the same kind as the tumor. On lifting up the anterior lobes of the cerebrum, there was seen, in the median line of the skull, a tumor the size of a small orange, resting on the ethmoid and sphenoid bones, and rising, almost spherical, against the anterior lobes, compressing them against the vault of the skull, and producing a deep excavation in them. The tumor extended from the foramen cæcum of the frontal bone posteriorly as far as the posterior clinoid processes of the sphenoid bone, and laterally on

both sides over the greater wings of the sphenoid and orbital plates of the frontal. It measured two and five-eighths inches antero-posteriorly, two and three-fourths inches laterally, and two inches vertically. It was nearly spherical, though irregular and somewhat indistinctly lobulated, and at its base was firmly adherent to the dura mater over the ethmoid and sphenoid bones. It was covered with a delicate, highly-vascular membrane, probably a prolongation of the pia mater, and was of a grayish-pink color. The olfactory bulbs and nerves were completely flattened and very thin, the optic chiasm and nerves were flattened and pushed backwards, the pituitary fossa was filled up by the tumor, which on the left side also overhung somewhat the sphenoidal fissure. The third, fourth, the ophthalmic branch of the fifth, and the sixth nerves did not seem to have been encroached upon in their course, and yet the pupils were widely dilated, and so remained until just before death.

After the specimen, consisting of the base of the skull with the tumor in position, had been preserved in alcohol for three weeks, the eyes were enucleated and opened in the vertical meridian. The cornea and iris appeared normal, and the anterior chamber was of natural depth. The lens was in position, but presented a peculiar appearance; for while the posterior layers were cloudy, probably from the coagulating effects of the alcohol, the anterior layers were of a dense yellowish-white color, and much harder than the posterior layers. The vitreous was changed into a deep-yellow, grumous fluid; the retina was detached below from the ora serrata nearly to the optic nerve entrance, and very much thickened. The choroid appeared normal, as well as the optic nerve. There had evidently been a hyalitis with retinitis, which had caused some change in the lens, and the effects produced were about the same in the two eyes.

A microscopical examination of the optic nerves revealed the following state of affairs. The external sheath, continuous with the sclera, was enormously thickened, and the interspaces between the connective-tissue fibres were filled with round and fusiform cells, the result of inflammatory proliferation. The inner sheath was also hypertrophied, though not to the same extent, and here also the interspaces were occupied by round and fusiform cells. The fibrinous skeleton framework of the nerve was very much thickened in all directions, at the expense of the nerve-fibres, which were compressed and atrophied. In some places the contents of the neurilemma had entirely disappeared, and the place was occupied by fat-globules and an amorphous detritus. In other places the spaces made vacant by the atrophy of the nerve-tissue were filled by the products of inflammation, round and fusiform nucleated cells, and some fibres. The central artery and vein of the retina were almost obliterated, from an encroachment on their calibre by the increase of fibrous tissue. Examination of a transverse section of the nerve corroborated what was found in a longitudinal section, and here the hypertrophy of the fibrous tissue of the nerve was particularly well shown. The same state of affairs existed in the nerve as far back as the optic foramen. The rest of the nerves, as far back as the chiasm, and the chiasm itself, were not examined, in order to avoid disturbing the tumor.

An examination of the retina showed that the thickness of this coat was due mainly to a great increase in the external granule layer, next the rods and cones. The nerve-fibre and ganglion-layers were scarcely altered, and the layer of rods and cones had undergone but little change. The connective-tissue framework or Müller's fibres stood out plainly, and the membrana limitans externa was very distinctly marked. The

external granule layer, however, was thickened, especially near the optic nerve entrance, where it was increased enormously and seemed to run into and swallow up the middle and internal granule layers, so as to form one mass of fine granules and round nucleated cells, pressed closely together and bulging forward towards the vitreous humor. The entrance of the optic nerve was but a trifle swollen towards the edges, and this appeared to be due to the hypertrophy of the retina, for it was somewhat deeply excavated at the centre. The nerve-fibres were atrophied by pressure, though not so much so as they were farther back. The *membrana limitans interna* was only faintly defined, but this might be due to post-mortem changes.

The choroid was apparently normal in texture, though there might have been a slight atrophy of the pigment-cells in its stroma; but there were no signs of any inflammatory process. The vitreous was very much altered. The mass of it was made up of inflammatory exudation, consisting of some fibres, and many round and oval nucleated cells with granular contents, some of the size of pus-corpuscles, others somewhat larger. Some of the oval cells had two nuclei with nucleoli, others only one.

The lens presented the usual appearance of a cataractous lens, the process being most marked in the anterior layers. Here the whole thickness of the anterior layers was filled with round and oval cells, with a very few altered lens-fibres running through them. The centre of the lens was comparatively free from the inflammatory changes, but the posterior layers were again very much altered, like the anterior layers. The posterior capsule was somewhat thickened, though not markedly so, and was firmly adherent to the hyaloid membrane. The cornea and iris were healthy, as was also the ciliary body. There had evidently been set up a pure neuritis by the pressure of the tumor upon the chiasm and nerves. The inflammatory action had commenced in the sheath, and from thence had spread to the connective-tissue frame-work of the nerves, causing an increase in the fibrous tissue, great proliferation of cells, and secondary atrophy of the nerve-fibres from pressure.

We have been accustomed to connect the presence of a cerebral tumor with a condition of ischæmia of the optic disk, or, as it is called, congestion-papilla, caused by increase of the intra-cranial pressure, and a secondary obstruction to the return or venous circulation of the eye. This produces enormous swelling of the optic disk, with serous exudation, and sometimes hemorrhages into the papilla and retina; and, secondarily, atrophy of the nerve-fibres if the pressure is not relieved. Now, whether this had occurred in our case as one of the first symptoms of the disease, it is now impossible to say; but certainly there had been a most marked "neuritis interstitialis," which probably extended from the optic chiasm down to the lamina cribrosa, and had ended in atrophy of the nerve-fibres, and this condition of affairs might easily have been recognized with the ophthalmoscope if the lens had not been opaque.

Exactly how this interstitial neuritis commenced it is very difficult to say. There were no signs of any meningitis anywhere at the base of the brain, so that it is not at all likely that the inflammatory process began in the meninges. Of course we know that a tumor of such a size would act as a foreign body, and be likely, from its position, to light up a perineuritis or inflammation of the sheath of the optic nerve, which would then spread by continuity of tissue and vascular supply to the inner sheath and skeleton frame-work of the nerve. This is perhaps the most probable origin and course of the neuritis in this case. From the position of the tumor it is evident that it could not have exercised any *direct*

pressure upon the cavernous sinus or upon the ophthalmic vein, but a very great *indirect* pressure undoubtedly existed through the medium of the circular sinus surrounding the pituitary gland, the anterior half of which must have been compressed by the growth, and thus, to a certain extent, the current of blood was forced back into the cavernous sinus. This would probably have produced congestion of the optic disks on both sides, with serous exudation, from hindrance to the return circulation through the central retinal vein as well as other veins emptying into the ophthalmic vein. The main process was, however, an inflammatory one—a simple neuritis descendens.

The tumor, on being cut into, appeared to the naked eye of a homogeneous structure, of a pale-gray color throughout, except at the centre, where it was of a light pink tinge. It seemed to be surrounded by a delicate vascular membrane, which was probably the pia mater or a prolongation of it. A closer examination showed the cut surface to be finely granular, but the tumor was firm and solid throughout. A microscopical examination showed that the growth was a sarcoma of mixed character, though the same general proportion and relations between its different constituents was preserved throughout. There was quite an extensively developed skeleton or frame-work, which was apparently composed of fibres of connective tissue, but a more careful examination proved that most of these apparent fibres were long, narrow, fusiform cells, with a large central nucleus and nucleolus, and granular contents which were placed end to end and side by side, and were arranged so closely as to resemble connective tissue. In addition to these cells in the framework, there were also some real connective-tissue fibres, which, running in every direction, served to strengthen the skeleton of the tumor. Taking the tumor as a whole, there were two kinds of cells which made up its mass: (1) small, round, nucleated cells, about the size of blood-globules, some being a trifle larger; and (2) long, fusiform, or spindle cells, with large nuclei; and hence the growth might be termed a round-cell sarcoma or spindle-cell sarcoma, according as one or the other variety of cell predominated. In many places the tumor assumed a carcinomatous character, for these fusiform cells or fibres formed incomplete alveoli, by enclosing spaces between them, which were filled by masses of the round cells and by larger round or ovoid cells, with immense nuclei, and sometimes two or three of them, which resembled the giant-cells that are occasionally met with in sarcomatous tumors. This alveolar arrangement was not, however, sufficiently well marked to stamp the growth as carcinomatous. One characteristic of the tumor was a frequent arrangement of round cells into balls or clumps, which were surrounded by a membrane-like layer of spindle-cells, and which is well represented in a wood-cut on page 662 of Billroth's "*Allgemeine Chirurgische Pathologie*," fourth edition. Sometimes within this cell-wall of spindle-cells were three or four nuclei, or what looked like such, each with a nucleolus, while again in others would be seen two or more complete, large, round, nucleated cells, each within its own cell-wall of spindle-cells, and the whole surrounded by a common wall of the same fusiform cells. The alveolar arrangement above spoken of was of the same appearance as is represented in Fig. 123 on page 663 of Billroth's work just quoted, taken from an alveolar sarcoma of the tibia. The cells were about the size there represented, though they were crowded somewhat more closely together than is represented in the figure, but the alveolar arrangement was not nearly so well marked.

Where there are so many different forms represented in a growth, it is not always an easy matter to decide

exactly in what class of tumors to place a specimen. As we see in this case, the influence which the original locality or mother-tissue exerts upon the development of the tumor is exceedingly powerful. The dura mater is a fibrous membrane with one serous surface, composed of fibrous tissue, that is, long fibres of connective tissue, fusiform fibre-cells, with some round, nucleated cells. A morbid growth originating here will be made up of just such tissue,—that is, it will be a spindle-cell sarcoma, with large fusiform cells, or perhaps a "sarcoma fibro-cellulare," if there is a great preponderance of these fibre-cells. The tumor was not very vascular, and there seemed to be a greater development of vessels towards the periphery than elsewhere. We learn from Virchow that sarcomata of the dura mater occur most often on its cerebral or visceral surface, and very rarely on the parietal surface. They also are most frequently met with at the base of the brain, upon the sella turcica or petrous bone. Their main effect is pressure, as well upon the cranial nerves as upon the brain itself. In the latter they frequently cause deep excavations, though they very seldom are directly connected with it. The subjacent bones also frequently undergo absorption and atrophy from pressure.

Unfortunately, the history of our patient prior to his admission to the asylum is almost a blank, and it is, perhaps, equally unfortunate that an ophthalmoscopic examination was not made. Yet it is very likely that this would have been impossible, owing to the cloudy state of the lens. At some period in the course of the disease the blindness must have been partial, and if the field of vision had been tested it would undoubtedly have proved defective in the outer half; that is, the patient would not have seen with the inner or nasal half of each retina, and would have presented that rare form of hemiopia caused by some growth situated in front of the chiasm between the optic nerves and pressing upon the inner half of both nerves which supply the inner half of each retina. Of course, a tumor situated in such a locality, and exerting a bilateral pressure upon the inner portions of both nerves, would end by producing complete amaurosis of both eyes, not only by growing over both nerves but also by compressing the chiasm, and this without regard to the arrangement of the optic nerve-fibres in the chiasm.

The subject of intracranial tumors with intra-ocular manifestations has long been the classical ground of ophthalmoscopy, and a very large number of cases have been noted and examinations carefully made, with reference to the symptoms which may be diagnosticated; and yet, when we come to examine the published literature of the subject carefully, we confess, with a feeling of disappointment, that we are really unable to decide finally the actual value of this or that change in the optic nerve in helping us to diagnosticate the presence or absence of an intracranial growth. These encephalic tumors are by no means common, and when we do meet with them it is often impossible to observe them long enough in their course to make our observations of value. Nearly all the statistics and tabulated lists of such cases which we possess, from Ladame's monograph to Annuske's paper in the *Archiv für Ophthalmologie*, Bd. xix., are unsatisfactory, fragmentary, and hence of not much value, and the history of

the preceding case belongs to the same category. A mere statement of the condition of vision, even when it has been carefully tested, is of very little value unless it has been accompanied by a careful ophthalmoscopic examination, for it is well known that a patient's vision may be actually perfect or nearly so and yet he may have a well-developed neuritis in both eyes. There is very great need of more accuracy in recording the results of examination in these cases, and not only should the vision and visual field be carefully tested, but these examinations should be frequently repeated as long as the patient is under observation. Only by this careful attention to details can we make our statistics and reported histories of any practical value; and not until we have learned this lesson faithfully can we feel ourselves able to cope with the difficulties attendant upon the diagnosis of intracranial disorders by means of the ophthalmoscope. It is my own conviction, from the observation of cases of optic neuritis and congestion-papilla which have been under my care, and of those which I have been allowed to examine by the kindness of brother practitioners, that optic neuritis reveals to us nothing more definite than the presence of organic disease of some kind within the skull, and that its diagnostic value is the same whether vision is affected or not. There is no difference in the variety of optic neuritis, whether the tumor or inflammation causing it be in the cerebrum, cerebellum, or large ganglia at the base of the brain; whether the cause be syphilitic or not. And more than all, to my own mind, neuritis is of no value whatever in localizing the trouble, except so far as it proves it to be within the skull, or at least posterior to the eyeball. In searching the literature of intracranial tumors so far as it has come within my reach, I have been able to find only twenty-five cases in which the autopsy showed that the tumor was situated in the anterior fossæ of the skull, lying in front of or upon the optic chiasm. We learn from this that a tumor occurring in this locality is a comparatively rare specimen.

214 WEST FORTY-FOURTH STREET, NEW YORK, Dec. 5, 1874.

CLINICAL NOTES AND REFLECTIONS.

BY WILLIAM HUNT, M.D.

YOU have, Mr. Editor, asked me several times for some notes of hospital experience for the *Times*. The pulse, temperature, skin, tongue, etc., style of notation, useful and absolutely necessary as it is for precise observation, is to me very tiresome: so, if you accept anything, it will have to be in another form, which, if not so instructive, will, I hope, at least be interesting.

ESMARCH'S METHOD.

We have used this method of controlling hemorrhage a number of times in the hospital. I think that much more care is required in its use in chronic than in acute cases. In the former class the operation will proceed bloodlessly, perhaps, until the main vessels have been secured and the apparatus is being removed; then the (enormous, sometimes)

number of vessels that have been developed during the long-lasting disease begin to bleed, the veins, especially the superficial ones, cannot perform their return function in the stump so long as there is one turn of the elastic cord about the limb, confusion is produced by the mixture of arterial and venous blood, and the case proceeding so beautifully at first may end in the loss of more blood than by the old way. Recently we have had a thigh-case in which I have thought it would have been better, immediately upon securing the main vessel, to remove the bandage and tubing entirely, and then to control the rest of the arterial bleeding by digital pressure until the remaining vessels were tied, thus leaving all the venous channels free. I have had great satisfaction with the method in acute cases where the loss of blood had been very great through the accident, and it was desirable, or even absolutely necessary, not to lose any more. In one instance a man was almost exsanguine from hemorrhage resulting from a gun-shot wound of the wrist. Without the method I should have applied a tourniquet and treated for reaction, but with it I was enabled to amputate at once. It is an important point in these cases to cut squarely through the muscles and vessels, for then the latter are easily seen, and not buried at varying distances in the nearly inaccessible interspaces made by oblique incisions. The injunctions of Prof. Esmarch himself, supported by the experience of Drs. Keen, Mears, and others in this country, as to applying the apparatus too tightly, are, I am confident, very important, particularly as to the production of paralysis. The professor says he has had to prevent his own assistants from committing this error.

The danger of driving morbid material out of the limb towards the centre of the body, as pointed out by Mr. Erichsen, is a serious consideration, but we are in want of any single observation as yet, I think, proving this point. According to our experience, then, what would seem to be wanting is the avoidance of venous pressure during the latter stages of an operation, especially in chronic cases,—a matter that is so easily managed in the ordinary way, by a good assistant at the screw of the tourniquet or with the fingers. Another thing: I think we must not allow our fears at the loss of a little blood to govern us too strongly. I have elsewhere stated my reasons for believing that patients otherwise in full health, and who have not lost much or any blood already, are in no wise worse for the loss of a small quantity during an operation.

ARE THE KIDNEYS ACTIVE ELIMINATORS OF ETHER?

A young man, aged about 30, was brought into the hospital for a railroad crush of the fore-arm, requiring amputation above the elbow. He had been a drinking man, but there was nothing in his appearance to suggest excess in this way, nor was there any other external sign of disease. He was taken into the clinic-room, and etherization was begun. Fortunately, I had my fingers on his pulse, and suddenly felt it drop after but a few inhalations had been taken. The patient seemed to be sinking. Etherization was suspended at once, restoratives were

applied, and he was removed from the room. In the afternoon he had reacted, and another attempt was made to operate. We were now fully on guard as to the ether. After a very few whiffs, the pulse began to sink, and we were threatened with a repetition of the morning's experience. The ether was withdrawn, and the operation was performed without it by Dr. A. V. Meigs.

For a few days the patient did well as to his stump, and also in other respects; but he then grew gradually worse, became feverish and delirious; the stump ceased to heal, but did not contract as in pyæmia cases. An examination of the urine was unfortunately overlooked, as there was no dropsy, nor other symptom to call attention to it. The condition was not pyæmic, but it was attributed partly to the accident and partly to the habits of the patient, and was classed under the general head of Surgical Fever.

The unfavorable symptoms continued, and death occurred in about two weeks after the injury was received. The post-mortem showed the kidneys to be in a marked stage of fatty degeneration, so that their functions must have been very materially interfered with. What relation had the inability to take ether to do with this condition? May not conditions of this kind often explain the unpleasant and even fatal action of an anæsthetic?

The practical lesson is obvious. Before a serious operation, should there be the slightest reason to suspect hidden trouble, examine the organs and the secretions, and be on guard.

ETHER AT NIGHT.

Caution as to the use of this agent at night cannot be too frequently urged. The lights should always be *above* the operator and etherizer, and the neighborhood of a low grate or of an open stove should be carefully avoided. The vapor of ether is very heavy, and falls rapidly, as any one can test by pouring a little of the liquid into a saucer and watching it roll and fall over the sides. One of the most exciting and seriously threatening scenes that I have ever been engaged in happened in this way.

A man required amputation of the arm (which was crushed by an engine) high up. There was, fortunately, just room for the tourniquet. The residents of the hospital, together with Drs. Agnew and Herbert Norris, were assisting. The latter administered the ether from a large sponge, and placed the bottle on a chair at his side. I had just removed the dangling fragments of the limb, when an assistant brought a candle close to the stump; and almost directly under the sponge. Instantly we were in a blaze. Dr. Norris involuntarily started back, and, in doing so, knocked over the chair with the large ether-bottle, which broke! Its contents were quickly spread, and the whole ring of the amphitheatre was on fire. A nurse lifted the patient from the table and placed him on the floor. Fortunately, the tourniquet held. Others sprang into the side wards and seized blankets, coats, and anything at hand, and we soon stamped the fire out, but were all more or less singed. The walls of the amphitheatre bore evidence for a long time, in the

scorched wood and blistered paint, of the danger. The exposed parts of the patient were superficially burned, but he never knew what had happened. He was placed on the table, and the operation was finished. The thorough anæsthesia here was fortunate for all. Had the fire taken place earlier, terror and excitement from ether combined would have made the man uncontrollable, and a fearful panic might have occurred in the hospital. As it was, no alarm was spread beyond the room.

Night operations with ether should, therefore, only be those of absolute necessity, and with the cautions enjoined there need be no danger. Chloroform, not being inflammable, has a great advantage over ether in this respect; but, I confess, I am afraid of it.

MAGGOTS.

If you keep the maggot-fly away, the maggots won't come. She deposits her little white masses of living young with astonishing quickness, and they are ready to go about their work with almost equal celerity. It is, therefore, nearly impossible, sometimes, to keep them away. But what if they do come? They are fearfully disgusting, that is true; but, except when they get into the wrong places, they do no harm: nay, it is a question whether they don't do a certain amount of good by acting as scavengers. They consume only the dead matter. I have often seen a wound healing kindly under them as though under a living poultice,—a poultice of active properties, converting harmful dead material into live, harmless substance.

Now, I am no advocate of maggots: as I said, they are disgusting; but, if they do come, get rid of them quietly, and do not make so much fuss about them, and so favor the popular notion that the man is going to die because he is breeding worms.

(To be continued.)

OPERATION FOR THE CURE OF ELEPHANTIASIS OF THE SCROTUM.

BY J. G. KERR, M.D.,

Canton, China.

(Communicated in a letter to Prof. Gross.)

AS I have not seen, in the works on surgery within my reach, any mention of operation for this disease, I will give a short account of a case operated on in the Medical Missionary Society's Hospital. In the Medical Reports of the Foreign Customs Service of China, the operation is very fully described by Dr. Manson, of Amoy.

Elephantiasis is frequently seen in South China in various forms. I have seen it in almost all parts of the body. In the leg it is most frequent, sometimes in one, sometimes in both. Next in frequency, it attacks the scrotum. I removed, a short time ago, from a boy nine years old, the prepuce and half the skin covering the organ, for elephantiasis. I have seen it attack the nose, the lips, the neck, and in one case the arm was the seat of the disease.

My patient was a native of Tsang-shing district,

about forty miles from Canton, aged 42 years, and a laborer by occupation.

The scrotum began to enlarge about seven years ago, and has continued to increase ever since.

The patient (June 20) was laid on a table, with his feet on stools and the knees supported by assistants. After giving chloroform, an incision was made an inch or more to the left of the median line, opposite the orifice of the prepuce, large enough to admit the hand. The testicle was searched for, isolated, then returned, and the wound stuffed with cotton. The same thing was done for the right testicle.

A knife, entering the orifice of the prepuce, opened the skin to the pubis, and the penis was entirely dissected from the covering, the mucous membrane of the prepuce being cut off close to the base of the corona.

Two semicircular flaps were then dissected up from the sides of the tumor opposite the upper part of the thighs. The incisions for these flaps joined, or nearly so, in the perineum, but the upper extremities were united by a horizontal transverse incision on the pubis. The incisions for the testicles were then extended upward to this transverse incision, and the spermatic cords dissected up to the same extent.

Having placed the testicles and penis on the abdomen, in the hands of an assistant, the tumor was dissected from its attachments and removed, care being taken not to wound the urethra. Arteries bleeding too freely were tied when divided. The weight of the tumor was eight and a half pounds.

The flaps were brought together in the median line, and the upper edges joined to the upper side of the transverse incision over the os pubis, making a complete covering for the testicles, with the lines of union in the shape of a T. The penis projected at the point of union of the two lines, and was left to cicatrize.

The case progressed favorably, and in three weeks the wound was almost entirely healed, but the cicatrization of the penis was not quite complete when the patient left the hospital, twenty-seven days after the operation.

HYPERTROPHY OF CORPORA CAVERNOSA.

BY J. G. KERR, M.D.,

Canton, China.

(Communicated in a letter to Prof. Gross.)

THE subject of this was a well-developed man, aged 33 years, a native of Nan-hai district, a cook, and married, but having no children. The enlargement of the penis began when he was six or seven years old. On his admission to the Medical Missionary Society's Hospital, the organ was about three and a half or four inches in diameter. The left side was larger than the right, and it projected beyond the corona of the glans. There was partial phimosis, but the skin of the penis and scrotum was healthy. The testicles were of the usual size, but somewhat soft, and there was slight varicocele.

There was no sexual desire, and no erections, and sexual connection was impossible.

In consultation with Dr. Scott, of Canton, on the 28th of July, it was determined to operate, although it was not evident what the exact nature of the disease was. On opening the prepuce, the glans was healthy, and an extension of the incision showed that the cavernous bodies were hypertrophied and condensed. A considerable portion was removed, and the cut surface showed the open mouths of the arteries and veins, not numerous, but the hemorrhage was troublesome, and was only controlled by bandaging the organ on a silver catheter. I was satisfied at the time of the operation that no good was done to the patient, and I was gratified when, with a little sloughing of the skin, he recovered in a month's time, with the organ two and a half inches in diameter and six inches in circumference.

I find in Gross's and Paget's works on Pathology no mention of any hypertrophy of the cavernous bodies; and my operation has amounted to little more than an exploration in the living subject of a rare disease.

While the scrotum was healthy, there was also enlargement of the perineum, but, as it was not operated upon, the nature of it is not known.

AN ANOMALOUS CASE.

BY J. E. GARRETSON, M.D.

THE following anomalous, if not unique, case would seem to go far in favor of the view of Solly and Dalrymple, that mollities ossium is an expression of the cancer-vice.

Some four years back, Major S., of Tennessee, a gentleman of robust constitution and in apparently the most vigorous health, was sent to me by his physician for consultation and advice, the case presenting at the time these features: The teeth of the left side, superior jaw, from the central incisor to the last molar, were found loose in mass, not individually, but as if all that portion of the bone containing the alveoli had separated from the adjacent hard parts, forming with the dental organs a common sequestrum. Preceding this condition there had been no exhibition of inflammatory phenomena, nor, at the time of interview, was there the slightest expression of vascular perversion.

Using the exploring-needle in the examination, I found no evidence of bone, either in the loosened portion or in the parts immediately adjacent. The operation consisted of an external and internal flap, thus liberating the exfoliation, which, when removed, was found to consist of a remarkably healthy-looking alveolar mass, made up apparently of cartilaginous tissue.

Close study of the case, made at the time, verified the absence of any of the ordinary constitutional diseases, such as syphilis, tuberculosis, scrofulosis, etc., to which osteomalacia is frequently attributed; neither was there evidence or knowledge of local injury or of defect on the part of the nervous relations.

In the healing of the wound made at the time, it was noticed that simple and immediate reunion occurred with the raw surfaces of the flaps, and that these adhered to the enveloped parts by a mechanical rather than a physiological attachment. The patient in five days was sufficiently recovered to be out on the streets, and in three weeks returned to his home.

One year later, the patient returned to Philadelphia for further advice. Absorption of the remaining portion of maxilla, together with the malar bone, had progressed in the interim to an extent which showed marked deformity by flattening of all that side of the face. Horseback-riding in the early morning, and salt-water bathing, conjoined with the phosphate tonics, were directed.

The continued history of the case is given in the accompanying letter, just received from the attending physician. The final result I shall look for with great interest, trusting that it may be more favorable than would seem to be warranted by the description of Dr. Scruggs:

"SWEETWATER, TENN., December 10, 1874.

"DR. GARRETSON:

"DEAR DOCTOR,—Your old patient, Major W. E. S., on whom you performed an operation some time ago, requests me to write you in reference to his condition and ask you to make such suggestions for his treatment as you might think proper. You will recollect that the upper jaw and cheek-bone on the left side were removed. Since his visit to you, the other side has absorbed almost as much, but there is a bony projection under the right eye, while there is none under the left. There seems now to be a fleshy growth or enlargement that occupies the place where the bones were, and this is causing the face to protrude and to appear much enlarged. The growth seems to infringe upon the region of the left eye so much that the organ is forced outward and upward, leaving its socket considerably. The right eye, however, being protected by the bones just under it, is not disturbed, and in consequence the enlargement is forced downwards and outwards on the right side more than on the left. There is very little pain about the face, but a feeling of tightness, which is increased when the parts are unprotected. There is some secretion from the nares, front and rear, causing occasional spitting and blowing of the nose. There is a fleshy teat appearing in the left nostril, and I think likely the entire enlargement of the face is due to a similar growth. The major's health otherwise is very good. He has lately been using iodide of potassium in comp. syr. of stillingia, also Fowler's solution. But I do not look for a reduction of the seeming fleshy enlargement from this treatment. There seems to be no fungous appearance about the growth.

"Advise me what further is to be done.

"Very truly, etc.,

"R. F. SCRUGGS, M.D.,
"Attending Physician."

A CASE OF PARESIS OF THE CILIARY MUSCLE FOLLOWING DIPHTHERIA.

BY F. D. CASTLE, M.D.

E. D., a lad of 15 years of age, presented himself in my office a short time ago, with the complaint that he had for the last two days experienced great difficulty in reading and writing, and was obliged to hold the book at a great distance in order to perceive

the letters at all, but even then could not see distinctly. He found, however, that the use of his father's spectacles restored his vision for near objects to its former degree of acuteness. He also informed me that he was convalescent from an attack of diphtheria.

The refraction of both eyes was found to be emmetropic, but convex glass No. 20 was needed in order to relieve the parietic ciliary muscle and enable the patient to read and write with comfort.

The circumstance that no other muscle or group of muscles were affected in a similar way is interesting. The soft palate was entirely free from paralytic disturbance. There was also no anæsthesia of the fauces.

The treatment consisted in the use of convex glasses No. 20, with quinine and iron internally. The parietic symptoms rapidly disappeared, so that weaker glasses could be used for reading, and even these were eventually dispensed with. The use of electricity, as recommended by Benedikt, was not found necessary in this case, as recovery took place rapidly under the above-mentioned treatment.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

CLINICAL SERVICE OF FRANK HASTINGS HAMILTON, M.D.,

Prof. of Surgery at the Bellevue Hospital Medical College.

FRACTURE OF THE CLAVICLE.

HERE, gentlemen, is a green-stick fracture, occurring in a lad about twelve years of age. About one week since, he fell from a swing, striking upon his shoulder, and breaking the clavicle near its middle; but, as often happens with children, the fracture was not complete. It is called a green-stick fracture because it resembles the fracture which occurs in a green stick when it is bent. Some years since, I experimented upon the bones of chickens, and I found that sometimes the bone would break partly off and then immediately spring back to its natural form, and in other cases it would remain bent. In the latter case the digitations in the line of fracture prevented the reposition of the fragments; but in both cases a callus would soon form over the seat of fracture. In the case of this lad, the fragments have spontaneously resumed their position; but on the day following the accident his father noticed a small swelling upon the clavicle at the point of fracture, and this has continued to increase until now it is of the size and form of the half of a pullet's egg, oblong, smooth, without discoloration, and to the fingers it feels hard, like bone. There is no crepitus or motion, the fragments being already partially united.

You will notice that the fracture is at the middle of the bone. This is usually the case in examples of partial fracture of the clavicle occurring in children; while the complete fracture of adults occurs, usually, at the junction of the outer and middle thirds.

No treatment is required in this case, except that the arm should be confined to the side of the body, in order to insure quietude, and that he should not be handled roughly. In one case reported to me by Dr. Green, of Cortland County, a partial fracture was converted into a complete fracture, after several days, by a fall.

The next case is a typical complete fracture occurring in an adult. The patient has also a fracture of the inferior maxilla; but of this I will speak at another time.

The patient fell upon his right shoulder, breaking the right clavicle obliquely, at the junction of the outer and

middle thirds. The outer end of the inner fragment forms a marked projection under the skin, although it has been carefully dressed with the figure-of-8 bandage recommended by Prof. Moore of Rochester. The principle upon which this apparatus is applied is sound, but, like all other forms of apparatus hitherto employed for broken collar-bones, it fails to accomplish the desired end in a large majority of cases. The dressing will be continued, but the result will be the usual overlapping and deformity. If the patient were fat, the deformity might not be seen, but he being thin and muscular it will be very apparent.

FRACTURE OF THE FEMUR—TREATED BY PLASTER OF PARIS.

This man suffered a simple fracture of his femur six weeks ago. He was taken immediately to the Park Reception Hospital, and, under the influence of ether, with extension made by pulleys, the plaster-of-Paris bandage was applied from the ankle to the loins. About two weeks later he was brought to Bellevue, and placed in Dr. Hamilton's service. The gentlemen in charge at the Park Hospital have a large experience in the use of plaster, and the dressings were well applied, except that, in the opinion of Dr. Hamilton, the foot should have been included in the plaster bandage. The swelling of the limb had also subsided sufficiently to leave the dressings a little loose. It was decided, therefore, to reapply the dressings. In the presence of the class the plaster was removed, and, on careful measurement, the limb was found to be shortened half an inch. He was then etherized, and extension applied until, in the opinion of Dr. Hamilton and of the house surgeon, further extension would be unsafe. The plaster bandages were then applied by the house surgeon, from the toes to the loins.

(The patient was subsequently brought before the class, in order to see what had been the result of this treatment. The splint was removed in the presence of the class, and, on examination, the limb was found united, with a shortening of one inch. This measurement was confirmed by several persons. It was apparent, therefore, that the limb had lost half an inch in length since the apparatus was applied; or, if we suppose that the extension made while the patient was under ether had overcome the shortening entirely, then the limb had lost one inch.)

A boy about eight years of age, whose thigh had been broken near its middle, was then brought before the class. The fracture was simple. It had been dressed with plaster of Paris, enclosing the entire limb and pelvis. On removal of the splint, the limb was found to be united, with a slight bend and a shortening of half an inch. Dr. Hamilton remarked that the bend would eventually disappear, and that the shortening would cause no lameness; yet with his own double splint for children a better result was generally obtained.

The patient was brought before the class for the purpose more especially of overcoming the ankylosis at the knee-joint, caused by the confinement. He was accordingly placed under the influence of ether and the ankylosis was broken up.

TRANSLATIONS.

TREATMENT OF AMMONIACAL CYSTITIS BY BENZOIC ACID.—MM. Gosselin and A. Robin have shown in a previous memoir that human urine, when ammoniacal, is toxic in a high degree, and that it plays an important part in the production of those accidents which occasionally supervene upon operations in the genito-urinary passages.

From this idea to that of prevention is but a step, and it is this which MM. Gosselin and Robin endeavor to elucidate in the *Archives de Médecine*. Their conclusions are as follows:

As the ammoniacal condition enters to a certain extent into the production of those accidents which supervene upon operations on the urinary passages, it is very desirable that it should be controlled, prevented, or diminished. Benzoic acid, the gums containing it, and probably also other vegetable products (salicine, cinnamic acid, etc.), conduce to this result. The hippuric acid thus created acts in various ways: *a*, in forming a hippurate of ammonium, less toxic than the carbonate of ammonium; *b*, in retarding the decomposition of the urine, and consequently the production of carbonate of ammonium; *c*, in preventing the formation of insoluble phosphatic deposits, which are one cause of cystitis and may become the starting-point of vesical calculi.

The administration of benzoic acid is to be recommended in the case of patients suffering from ammoniacal purulent cystitis, and particularly in the case of those who have submitted to operations on the genito-urinary passages.—*L'Abeille Méd.*, November 23, 1874. X.

REGENERATION OF THE SPINAL CORD.—Drs. H. Eichorst and B. Naumann have operated upon fifty-two puppies a few days old, because these animals offer the advantage of resistance to traumatism, and because they could be nourished by the mother. Thirteen of these puppies succumbed.

The operation was invariably performed by mashing the cord by means of a fine glass rod, introduced with as little injury as possible to the membranes.

The following were the results obtained: *Second day*, congestion and inflammation of the meninges. The cord at the injured spot presented the appearance of a jelly, composed, as was shown by microscopic examination, of the detritus of nervous elements. Above and below, in both gray and white substance, there was acute congestion with dilatation of the vessels, the walls of which contained proliferating elements. Destruction of the nervous elements was about taking place, and the elements of the neuroglia were proliferating.

By the *sixth day* the modifications still go on to a considerable degree. The entire crushed mass is in a condition of fatty degeneration, and begins already to be absorbed. In the cord, properly so called, the alterations extend but little beyond the point of lesion. They are particularly characterized by general inflammation of the conjunctiva and extravasation of the lymphatic elements.

After the *second week*, the meninges, which are closely adherent to one another, are the seat of a very decided proliferative inflammation; but these authors have in no case observed any suppurative meningitis.

It is not until the end of the *third week* that the "jelly" resulting from the crushing of the cord has disappeared completely, and that the true work of regeneration, so to speak, is observed. This work begins in the centre of a great number of cellules of the neuroglia condensed in the two ends of the cord, and is continued to the inner surface of the pia mater, so that a large cavity remains in the centre of the cicatrix. The authors have not determined whether this reparative process begins first in the upper or in the lower segment. Little by little the space circumscribed by this process diminishes; finally, at the end of the sixth month, it is somewhat larger than the ordinary central canal of the cord.

Up to the fourth week the renewed portion only contains the elements of granulation; little by little from this time nervous tubules are observed to become produced in this locality; these become rapidly more and

more perfect. Even after the eighth month, however, the nervous fasciculi are much less numerous at the borders of the cicatrix.

Another interesting point is the following: all that MM. Eichorst and Naumann have observed leads them to believe that the posterior furrow constitutes a true lymphatic sinus, in which this fluid circulates from the cervical to the lumbar region.

It is probable, also, that the postero-lateral furrow represents a lymphatic sinus, which surrounds on either side the posterior roots.—*Gaz. Heb.*, December 1, 1874; from *Archiv für Ex. Path.* X.

MAY CHLOROFORM BE EMPLOYED IN THE PERPETRATION OF CRIMES?—A correspondent of the *Société d'Hygiène et de Médecine Légale*, having been interrogated as a judicial expert as to "whether the employment of narcotics in the liquid or gaseous state can produce an anæsthesia so profound that violation of the persons to whom it has been given may be perpetrated without awakening them," gave an affirmative answer.

M. Dolbeau, apropos to this judgment, made a series of researches, the results of which were laid before the society at a recent session. He limits the question to the employment of chloroform, and starts with the following proposition:

"Can chloroform in vapor be administered to a person who is sleeping naturally, to the production of anæsthesia, without awakening him?"

In M. Dolbeau's experiments the chloroform was given in the usual manner, on a cone held an inch or so above the nostrils, so as to enable a constant view of the countenance.

In the first series of experiments three patients out of four were awakened by the chloroform-inhalations; in the second series, four out of six; in the third, only three out of nine.

It is not without interest to observe the increasing proportion of subjects anæsthetized; the manual dexterity acquired by the experiments is not without influence upon the results obtained. Accordingly, as a result of his experiments, M. Dolbeau believes himself authorized to formulate the following conclusions:

Scientifically, it is difficult, but often possible, to cause insensibility by means of chloroform in persons who are sleeping a natural sleep. Certain precautions, the employment of a perfectly pure agent, and experience, are also conditions which favor the attempt at anæsthesia.

It is probable that certain subjects are absolutely refractory; that is to say, that it is impossible to anæsthetize them without taking every precaution. Others, on the contrary, particularly young children, submit easily to anæsthesia, without having been awakened by the irritation produced by the anæsthetic agent in the air-passages.

From a criminal point of view, it is certain that chloroform administered to sleeping individuals may facilitate the perpetration of certain crimes: it is, however, probable that the conditions favorable to anæsthesia are rarely found on the occasion of criminal attempts. In justice, the expert should declare that it is possible, but not easy, to render a person who sleeps so insensible by chloroform that the said person might become the victim of any violence.—*La Tribune Médicale*, No. 323, 1874. X.

BILATERAL MASTODYNIA WITH SECRETION OF COLOSTRUM.—The following interesting case has been observed at the Heidelberg Clinic: The patient, a woman 26 years of age, pregnant only once, three years previously, irregular menstruation, applied for admission. On examination she was found to be anæmic, rather thin, no hysterical symptoms. The heart and lungs were normal. The mammae, pendulous and somewhat

flat, were normal in conformation; palpation of these organs gave rise to no abnormal sensation; there were no painful nodosities. While pressure exercised upon the mammae caused no pain, yet, on observation, some drops of a yellowish-white liquid were seen to exude from their orifices. This fluid, upon microscopic examination, showed the same appearance as colostrum.

The principal symptom of which the patient complained was pain, which had persisted for seven months previous to her admission to the hospital and continued during the nine months of her residence there. This pain, limited at first to the right breast, extended later to the left, and radiated in different directions, chiefly towards the shoulder on the right side. No tumor could be discovered in the mammary gland which would account for the pain, and this was therefore concluded to be due to neuralgia. No signs of pregnancy. Moderate leucorrhœal discharge.

Schultze, who reports this case, alludes to the various statements made by different authors as to its frequency. In looking over the literature of the subject, many cases of galactorrhœa may be found in both women and men, but this abnormal secretion has never been stated as co-existent with permanent pain. Nélaton alone has described a case of painful hypertrophy of the mammary gland in a young man of 26. (*Gaz. des Hôp.*, 1856, p. 126.) In this case the hypertrophied right mammary gland was the seat of violent pain, and, when compressed, gave exit to a liquid possessing the aspect and characters of milk. Schultze believes the galactorrhœa observed in these cases to be due to the same cause as the lachrymation observed in neuralgia of the trigemina, and the nasal secretion caused by neuralgia of the second pair of cervical nerves.—*Gaz. Méd. de Paris*; from *Berlin. Klin. Wochenschrift*, No. 42, 1874.

THERAPEUTIC NOTES.

SYRUPUS ASARI CANADENSIS COMP. (Compound Syrup of Canada Snakeroot).—Take of

Canada snake-root, one troyounce;
Alcohol, three fluidounces;
Water, six fluidounces.

Mix, and digest for twelve hours, strain, pack the root into a percolator, pour the tincture upon it, return the first portions that percolate to the instrument till it passes clear; pass sufficient water through the percolator to make the tincture measure nine fluidounces; add to the tincture one avoirdupois pound of sugar, and dissolve without heat. To this add

Powdered cochineal, ten grains;
Carbonate of potassium, twenty grains;
Wine of ipecac, four fluidrachms.

Mix thoroughly; strain.

In reply to numerous letters of inquiry respecting the compound syrup of asarum mentioned by Dr. S. S. Bond in his article on the treatment of "Ascaris Oxyuris," page 818, *Phila. Med. Times*, Sept. 26, 1874, I send the formula for publication, disclaiming any intention to have it appear as original with me. This preparation has been in use in this city for twelve or fifteen years as a remedy in whooping-cough, and the above formula is copied from page 21 of "Non-Official Formulæ in Local Use, compiled and published by the Joint Committee of the Medical and Pharmaceutical Associations of the District of Columbia, Washington, 1867."

The discovery of the anthelmintic properties of this syrup was quite accidental. About three years ago the daughter of Mr. F., then four years old, was attacked

with vaginitis and pruritus, which was found to be due to migration of ascarides to the vagina. He prescribed the usual remedies, bitter injections, etc., with considerable relief, but the symptoms would return in about a week after treatment was discontinued. The child had suffered more or less for over a year, when Professor Johnson Eliot, M.D., was called on to prescribe for whooping-cough, and ordered the comp. syrup. asari in teaspoonful doses three or four times daily. A few days afterwards the child passed seat-worms in large quantities, either alone or agglutinated together into balls as large as a hazel-nut. The father consulted me as to the probable cause of their sudden destruction. Remembering that I had heard anthelmintic properties ascribed to the European asarum, I was led to suppose that our plant might possess similar properties, and commenced a series of experiments on such persons as applied in my store "for something for pin-worms," with such flattering results that I requested my medical friends to experiment also. Drs. Bond and Duncan seem to be the only ones who have experimented to any extent; and both with excellent success. Dr. Bond's article you have published; I will give Dr. Duncan's experience in a few words. He had but one patient, a little girl who suffered from vaginitis due to migration. He used the syr. asari comp. internally, and a decoction of asarum as injections to both vagina and rectum, and in two days all trouble ceased. This was six months ago; there has been no return of symptoms since.

My own method of administering the medicine differs somewhat from the others. I mix equal parts of comp. syr. asarum and fld. ext. senna, and order a dessert-spoonful for a child, or a tablespoonful for an adult, to be taken four times daily, and at bedtime a suppository consisting of one or two drops of oleoresin of asarum* with cacao butter q. s. Three or four days' treatment usually effects a cure. I furnish the above facts that the value of the medicine may be more fully tested by the profession in general.

DR. J. SCHAFFIRT, *Pharmacist*.

WASHINGTON CITY, D.C.

IN ASTHMA.—

R Ext. belladonnæ,
Ext. opii, aa 3i gr.—M.

Ft. pil. no. x.

Sig.—One in the evening, to be repeated if necessary during the night.

INEBRIATION (*New York Medical Journal*, October, 1874).—Dr. T. D. Crothers, after considering the physiological and pathological effects of alcohol, arrives at the following conclusions:

1. Alcohol diminishes and destroys nerve-force, tending to develop paralysis of motor and functional activity.

2. Inebriety is a disease of certain parts of the brain, and of the nutritive functions which it controls.

3. This disease is provoked by alcohol in variable quantity, depending upon some unknown condition of the body at the time of exposure.

4. A weakened will-power, and mental aberration, and tendency to inebriety, not inherited, are manifestations of disturbance of the co-ordinating power of the nutritive function.

5. This disease is inherited, and exists as an alcoholic diathesis, which may spring into activity, remain latent, or develop into other irregularities and functional diseases.

6. Inebriety is the active cause of many of the nervous and functional diseases of the brain.

* The oleoresin asari is prepared by exhausting powdered asarum with sulphuric ether, and evaporating spontaneously.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

PERSECUTION OF VIVISECTORS.

AT the last meeting of the British Medical Association, M. Magnan demonstrated before a committee of the Association and various other gentlemen the differences in the action of alcohol and absinthe; tying, for the purpose, two dogs upon the table, placing a canula into the femoral vein of each, and injecting the poison. A very lively disturbance occurred during the experiment. Many protested against its performance, on the ground of its being cruel and unnecessary. One "British sportsman" was especially demonstrative, rushing forward and cutting the cords which bound the victims. Finally, however, the majority decided that the experiment should go on, and it was concluded. The press took up the affair very warmly, and at last the Royal Society for the Protection of Animals instituted a prosecution against Dr. Magnan and various Norwich physicians. The trial recently commenced amidst great excitement, but ended as a first-class farce. M. Magnan, preferring French despotism to English liberty, very naturally did not leave Paris in order to put in an appearance, and the prosecution failed entirely to prove that any other of the defendants were responsible for the experiment.

The legal persecution of vivisectionists has, we believe, never yet succeeded, and we trust it never may. At the same time, we think merely illustrative vivisection is often of doubtful morality.

A VERY extraordinary instance of the Philadelphia prejudice against specialism, founded probably on its being a *new* (?) thing, is seen in the recent action of the Managers of the Episcopal Hospital, a Board largely governed in such matters by its medical members.

The dispensary staff requested that special afternoon clinics be allowed, in order to relieve the general morning clinics, asserting that the latter were so overcrowded that it was impossible to attend properly to the patients. The staff demonstrated their statements by figures, but the Board of Managers declined to allow special clinics. Probably in the course of two or three generations Philadelphia conservatism will come to look upon specialism as allowable.

WE print under the head of "Notes and Queries," on account of the crowded state of our correspondence column, Dr. Richardson's reply to the recent animadversions on his paper. We are exceedingly sorry at the tone of the controversy, because the point at issue is one of great scientific importance. Dr. J. G. Hunt believes that the one-fiftieth objectives have no advantage over lower powers—Dr. Richardson believes that they have. Every microscopist is interested in the decision of this question, and we would suggest that a trial before competent judges should be had,—Dr. Hunt using his one-tenth, and Dr. Richardson his one-fiftieth. A result of real scientific value might thus be reached.

HYDROPHOBIA.—Mr. E. M. Wrench, F.R.C.S., in a letter to the London *Lancet* (December 12), states that he has known hydrophobia produced in man by the bite of a rabid jackal, and also states that although his own dog, having been bitten by a rabid animal, was killed before any signs of madness appeared, yet a puppy whose freshly-cropped ears had been licked by it was shortly afterwards seized with rabies, without other known cause.

SEVENTY thousand pounds sterling have been raised in Scotland for the purpose of improving the buildings of the Edinburgh University. But the sum not being sufficient, an effort is being made, with a fair prospect of success, to raise thirty thousand more in London.

THE odorless method of emptying cess-pools is now at work in Boston, to the great satisfaction of all parties concerned. How long shall that abomination—the night-cart—slop along our streets at the hour when places of amusement are dismissing and parties breaking up?

CORRESPONDENCE.

PHYSIOLOGICAL INSTITUTE OF LEIPSIK.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

THE rapidity with which my short account of Ludwig's jubilee was put into print was the cause of some pleasure, and perhaps a little astonishment, on this side of the Atlantic, as it decidedly antedated any similar account published here or in America either. I ought, however, to say that the jubilee took place on the 15th of October, while I find in the *Times* that it is dated the 14th; whether that be the fault of your devil or my dinner I cannot decide, but I think of the former.

As soon as heads were clear after the festivities, the Physiological Institute began work actively and in all its branches. These consist of a Histological, Physical, and Chemical Section, each of which occupies its own part of the building, which itself is worthy of a description.

It is a two-story U-shaped structure, with a basement. The upper floor is occupied by the family of Professor Ludwig; and in the basement, where the janitor lives, are to be found an ice-room, a home for frogs, an engine, which supplies power to the floor above, a workshop well supplied with tools, which the janitor, himself a carpenter by trade, superintends when occasion requires, a nicely-warmed room for animals with biliary and other fistulæ, and then the necessary rooms for the storage of coal and chemicals, as well as one for the safer carrying out of more dangerous chemical processes.

Under the lecture-room, which is a one-story addition which springs from the bottom of the U and extends between and parallel to its two limbs, is a menagerie for dogs, where they are exceedingly well housed and fed. These, however, are the only four-footed creatures kept in the building itself.

On the floor above, one wing is occupied by the chemical laboratory, out of which open at one end a room for spectroscopic work, and a balance room. This is moderately well supplied with the necessary conveniences, and is presided over by Dr. Drechsel. In the main building, which is, however, no larger than the wings, are the rooms more especially devoted to physical investigation, and where the animals are usually operated upon. In this, too, Professor Ludwig has his room, and there is a small library of the books and journals most likely to be needed by the students. The Microscopical or Histological Department comes next, and takes up the remaining wing, while, as I have said, in the space included by the three sides projects the lecture-room, which, though well supplied with conveniences for physiological demonstrations, is much too small for the class that crowds into it five times a week. Its small size and the absolute want of ventilation produce an atmosphere in the course of ten minutes to which that near the upper benches in the lecture-room in the old University building on a winter afternoon was as a breezy mountain-top; but in spite of that the lecturer always has an attentive and numerous audience, principally composed of medical students.

The students in the Institute nearly all, this year, come from other parts of Germany itself, but there are an Italian, a Russian, an Englishman, and two Americans. Last year, I am told, there were very few Germans comparatively. All the work done is of course under Professor Ludwig's general superintendence, but the Histological Department is under the more immediate superintendence of Dr. Flechsig, and on the Physical side Professor Kronecker is usually occupied.

The work that goes on is very various in kind, but there is a general tendency just now to the lymphatic system, which is being attacked from all quarters most vigorously, and I have no doubt that some good and interesting papers will be the result. Of course, of the exact line or nature of the work, even if I knew, I should not be at liberty to speak.

In the yard is a building in which rabbits and guinea-pigs are wonderfully well housed, and in which there are also two comfortable stalls for horses, with, in an adjoining room, a table and other arrangements for their dissection. It is but proper to state, before leaving this part of the subject, that, throughout, the animals are, whilst they live, most scrupulously attended to and fed and most kindly treated, while during the experiments everything possible is done to alleviate whatever suffering may necessarily be caused.

The Christmas vacation is rapidly approaching, and we are to have, I believe, nearly three weeks. This seems a long time to us, especially as in the spring there comes another of six weeks, and the summer vacation practically lasts from the 1st of August to the last week in October, while the students while at work—the medical students at least—are not driven as hard, in my opinion, as are ours at home.

These long vacations, however, are not intended so much for the benefit of the students as for that of the professors themselves, one of whom said the other day in conversation that while the student needed relaxation, and at the same time leisure to digest and assimilate the immense amount of fact and theory furnished him during the term, without this breathing-space the professors themselves, from whom something was of course always expected, would have no opportunity for original work, or at least very little. This would apply with even greater force in the latitude of Philadelphia, where the temperature of the summer months is not such as to invite prolonged mental effort.

As an offshoot from the Physiological Institute there exists a Physiological Society, composed principally of the officers and students of the former. It meets once a week, and as a rule a paper is read, of which the title has been announced beforehand. The reading of this is apt to be followed by an animated discussion, and, later, a fair proportion of the members adjourn to a neighboring restaurant, and bury in beer and supper whatever hatchets may have been disinterred earlier in the evening.

I read with much interest in the *Times* for November 21 the question of Dr. Macé, whether an International Medical Congress is to be held in Philadelphia in 1876,

for I have little doubt that if such a meeting were held, a number of eminent men from Europe would attend it. They would then have the opportunity of seeing something of America, in which many of them take great interest, and we at home could see and hear the men with whose writings we are so familiar. If, in addition, subjects for discussion were so chosen that men not exactly medical, but whose work has important bearing upon medicine and hygiene, could be induced to contribute papers and to attend, the meeting would be one of the greatest interest and importance.

LEIPSI, Dec. 14, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—So much has already been written about the *climate of the Bermudas* by those whose statements are based upon an extended personal experience, that I have hesitated to add my opinion, founded as it is upon a short visit, to this much more valuable testimony. The appearance, however, of an article entitled "Bermuda as a Winter Resort for Invalids," in a late issue of the *Philadelphia Medical Times* (December 19, 1874), from the pen of one who seems to have even less practical knowledge of the Bermudas than myself, has removed this hesitation, and has afforded an opportunity of placing before the profession a few facts which bear upon the subject.

The Bermuda Islands form, as every one knows, a small archipelago situated in the Atlantic, in latitude $32^{\circ} 15' N.$, longitude $64^{\circ} 51' W.$, and nearly six hundred miles distant from Cape Hatteras, the nearest point of land. The archipelago consists of one hundred and fifty islets, which occupy the southeastern side of a long coral reef; they form an interrupted chain of land fifteen miles long, and five miles wide at its broadest part, and with its long diameter extending from northeast to southwest. The chief of the group is Bermuda, or the Great Bermuda Island; upon it is built the town of Hamilton, the seat of the Legislature.

The islands are of calcareous formation; their surface is very irregular, and, although there are no mountains, there are numerous rather high hills, some of which are barren, while others are well wooded and fertile. Owing to the porous nature of the soil, little or no water accumulates upon the surface, even during the heaviest rains, and the amount of low-lying or marsh land is very small. There are no springs upon any of the islands: the inhabitants are therefore obliged to collect rain-water for drinking and other purposes; but so much care is exercised in this process, and the number of cisterns is so great, that there is always an abundant supply of pure water.

The nature of the climate of the Bermudas is what might be expected from their isolated position: it is oceanic, that is, the atmosphere is moist, and there are no great variations in temperature; both of these characteristics are intensified by the warmth of the Gulf Stream, which heats the cold air passing over it from the southwest, and by so doing enables more moisture

to be taken up. The winds from the northwest, on the other hand, are drier and colder, but not cold enough to affect the uniformly semi-tropical temperature of the islands. The features of the different seasons, and the influence of the prevailing winds, the southwest and northwest, upon the temperature, are well described by T. L. Godet, M.D., for many years a resident of Bermuda, in a work published in 1860, from which the following extract is taken:

"The most agreeable season at Bermuda is the winter, or cold season, which lasts from November to March; the mean temperature being 60° . The prevailing winds are then from the westward; but if from the northwest, fine, hard weather, with a clear sky, accompanies them, the thermometer varying from 50° to 56° . This weather often terminates in a very fine, bright day, with a very slight wind and partial calms. Afterwards the wind invariably changes to the southwest, and the weather becomes hazy, damp, and attended with heavy rains and gales, the thermometer rising to 66° and 70° . These alternate northwesterly and southwesterly winds prevail during nine months of the year, the wind remaining at no other point for any length of time. Spring commences at the end of February, and the weather usually continues mild, with refreshing showers of rain and gentle breezes from the south and west, until the end of May.

"The summer begins in June, and the weather becomes hot. Calms about this time generally replace the gentle breezes of May; the atmosphere becomes sultry and oppressive, and long droughts are common, which are usually succeeded by severe thunder-storms. The weather in September changes in character, and again becomes mild and agreeable."

In an appendix to the same volume, the average range of the barometer and thermometer for four years is given thus:

	Barometer.	Thermometer.
Maximum,	30.480	85.85°
Minimum,	29.236	49.00°
Mean,	29.858	67.43°
Oscillation,	1.244	36.85°

From another source we find that the total rain-fall for the year 1860 amounted to 65.14 inches.

That the statements of Dr. Godet are still applicable, or, in other words, that there has been no marked change in the climate, as suggested by a quotation in the article already referred to, is proved by reference to the latest official meteorological report, that of 1872; in this we meet with the following figures:

Range of Barometer and Thermometer.

	Barometer.	Thermometer.
Maximum,	30.410	94.2°
Minimum,	29.500	44.0°
Mean,	29.941	70.3°
Oscillation,	.910	50.2°

Total rain-fall, 66.90.*

* The average annual rain-fall in Bermuda is about 55 inches; in Philadelphia, about 50 inches.

Number of days on which rain fell, 175.

Wind from southwest on 110 days; from west on 28 days; from northwest on 53 days, etc.

The annual mortality is nearly the same as that of Philadelphia, being about two per cent. of the total population. The colony has occasionally been visited by yellow fever, but since its settlement, a period of over two centuries, there have been only eight epidemics of this disease.

As my visit to Bermuda was made in the spring, I am unable to speak from experience of the winter weather, but that of May (1874) was as pleasant as a warm sun, a clear sky, and delightful sea-breezes could make it, and was thoroughly appreciated after exposure to the damp and chilly days of April in Philadelphia.

From a somewhat minute inquiry made at the time, I was led to believe that November, December, March, and April were even more pleasant than May, the air being more bracing, and better adapted to out-door exercise. In January and February, periods of dampness and rain are liable to occur; though there are many days during these months which will bear comparison with our finest October weather. On the other hand, June, July, and August are too warm to suit those who have been in the habit of seeking a cool climate at this season of the year. Now, although the climate of Bermuda may be agreeable to the tourist during the early winter and spring, when a great part of the pleasure consists in escaping from the slush and monotony of our large cities, it does not necessarily follow that it is a proper one for all classes of invalids. I think that patients affected with phthisis, for instance, need a drier and more bracing atmosphere, and that those localities in which these conditions exist should have the preference over Bermuda, although in cases which are not too far advanced, and in which a great desideratum in a change of residence is to increase the facility for an out-door life, it seems that, during the proper season, these islands are quite as suitable as other more southern and more tropical places of resort.

Upon this subject Dr. Godet remarks,—

"As far as the author's observation goes, the effect of residence in Bermuda on such persons [those of "general delicacy of constitution"] is usually beneficial, especially on those who are predisposed to scrofula or pulmonary consumption, or who have evinced a peculiar tendency to colds and bronchial affections during the winter months."

Whether the climate is adapted to consumptives or not, there can be no doubt that there are many conditions to which it is suited. I refer to the various bronchial, rheumatic, and neuralgic affections, to general debility due to over-work, and to those cases in which complete convalescence after acute illness is delayed during our long, cold spring. I fully agree, however, with the correspondent of the *New York Post*, that Bermuda is no place to send "the dying," having always regarded it as good practice to keep persons in that condition at home. The invalid must not expect to find in this out-of-the-way part of the world the com-

forts of his own fireside, or even the accommodations of our large hotels, but he will be provided with a *clean* and plainly-furnished room, a *clean* bed, and an abundance of wholesome, well-cooked food. There are no open fireplaces in the sleeping-rooms; indeed, in the judgment of the inhabitants, they are unnecessary; but it is probable that as the wants of the travelling public become known, these, with other luxuries, will be introduced. This may be so even at present, for, since my visit, many alterations and additions have been made to the Hamilton House, the principal hotel.

Until recently, the great drawback to the Bermudas was their difficulty of access, not on account of the roughness or length of the voyage,—three days and a half being the usual time required to make the passage between New York and Bermuda or back,—but because of the poor accommodations for passengers on board of the steamers. The *Canima*, the only reliable one, was very deficient in this respect, but a thorough refitting at Cramp's ship-yard last fall has improved her wonderfully, and she is now quite comfortable. This vessel is seaworthy and fast, and since being refitted has, I am told, made several trips in the short space of sixty hours.

These few remarks may perhaps be enough both to show that no one need entertain the fear of either "starving" or "suffering for the ordinary comforts of life" in Bermuda, and also to induce those who may think the matter of sufficient importance to seek further information elsewhere.

LOUIS STARR, M.D.

REVIEWS AND BOOK NOTICES.

CYCLOPEDIA OF THE PRACTICE OF MEDICINE. Edited by Dr. H. VON ZIEMSEN. Vol. I.—Acute Infectious Diseases. Translated by various American Physicians. William Wood & Co., New York, 1874.

The coming of this work has been so loudly trumpeted that any account of its scope and aims is at present superfluous. This first volume contains about seven hundred neatly-printed pages of large, widely-leaded type, having just about sufficient matter to fill three hundred and fifty pages of the United States Dispensatory. We mention this because very many buyers of medical books judge whether a book is dear or cheap by the mere size of it. Judged by the size, the volume is a cheap book; judged by the amount of matter in it, it is a dear one.

As in all books of similar character, the articles are unequal, although none of them in the present volume are really poor. The first subject treated of is typhoid fever, which is handled in a masterly manner by Dr. Liebermeister, whose discussion of the use of the antipyretic treatment should be read by every one. We must, however, protest against the atrocious starvation diet which he recommends. He says, "*Water is the one nutritive* [?] substance which the patient needs most. . . . The fact is, mucilaginous barley-water, thin oat-meal gruel, and the like, combined with not very strong meat-broth, constitutes the most desirable diet. The patient may have, if he like, milk, but only when boiled and *reduced with water*." We should judge it to require a German constitution to withstand starva-

tion and typhoid fever at one time, even if an abundant supply of that highly nutritious and fattening food—water—was allowed both internally and externally. We fear very much that, throughout the whole *Cyclopaedia*, the department of treatment will be very weak. Thus, in Dr. Heubner's article on dysentery, pathology, symptoms, etiology, etc., are all good, until the section on treatment is reached. We doubt if this will give as much useful knowledge as is contained in Hartshorne's *Essentials* upon the same subject. The value of calomel is not at all discussed. The ipecac treatment is not mentioned, beyond the statement that ipecac has been employed in the disease; and none of those little but very important details which a practitioner looks for in so pretentious a work are to be met with.

Prof. Lebert has four articles in the volume, upon Relapsing Fever, Bilious Typhoid, Typhus Fever, and Cholera, respectively. His "Bilious Typhoid" seems to be a mongrel disease, the illegitimate offspring of an amalgamation in the author's mind of epidemics of relapsing fever and of malarial bilious fever.

Dr. Haenisch, who writes the article upon yellow fever, is evidently better acquainted with the disease as it appears in literature than as it appears in nature: he has, however, seemingly seen two cases, which he records at some length.

We have not space to review the volume before us at length. The book which comes into natural competition with the *Cyclopaedia* is Reynolds's *System*, and we do not hesitate to express the opinion that, so far as can be judged from a single volume, if the practitioner can buy only one of these works, the English should be his choice; not merely because it is a cheaper book, but because, in our belief, it is a better working book, containing much more information adapted for immediate clinical use. At the same time, it is right to say that the volume indicates that in the departments of pathology and etiology the *Cyclopaedia* will be unrivalled, and will therefore be a necessity to any one desirous of thoroughly knowing the science of clinical medicine.

TRANSACTIONS OF THE MEDICAL SOCIETY OF NEW JERSEY, 1874.

In this volume, which contains a handsome portrait on steel of the late Dr. Cooper, of Camden, New Jersey, we notice a number of things of interest. Dr. Sharp, of Medford, details a case of puerperal convulsions treated very successfully by two hypodermic injections of three drops each of the saturated tincture of *veratrum viride*. Dr. S. G. Carpenter asserts, in a paper on tetanus, that he has seen twenty-six out of thirty-seven cases get well. Dr. Carpenter must be the champion tetanus doctor. We doubt if any other one man on the continent has seen thirty-seven cases of the disease. Dr. C. W. Lanson narrates a curious case of aconite-poisoning. Dr. J. B. Mattison claims that the deep injection of chloroform is of the utmost value in obstinate neuralgia, even in true tic épiléptiforme; whilst various authors discuss the value of chloral, or report cases of tetanus, placenta prævia, excision of the hip, etc., etc. A good deal of this matter is of real interest. How much better if the State Transactions were confined to purely business matters, and what else is worth publishing transferred to the pages of a live journal, instead of being buried in a volume having no circulation outside of the State!

CONTRIBUTIONS TO THE ANNALS OF MEDICAL PROGRESS AND MEDICAL EDUCATION IN THE UNITED STATES BEFORE AND DURING THE WAR OF INDEPENDENCE. By JOSEPH M. TONER, M.D.

This brochure of 118 pages really belongs to the great class of local histories, and is largely composed of brief

biographical sketches. It contains very many interesting facts, whose gathering together must have been a very protracted and uninteresting labor. Indeed, the amount of human hopes and human actions summed up in its pages shows very forcibly the intrinsic littleness of the single individual man.

A HANDBOOK OF THERAPEUTICS. By SIDNEY RINGER, M.D. Fourth Edition. William Wood & Co.

The work of Dr. Ringer is so well known to the American public that we merely announce the appearance of a new edition. The chief change in the book is in the addition of articles upon Phosphorus, Croton Chloral, and Hamamelis.

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS. By SIR HENRY THOMPSON. Second American, from the Third English Edition.

In announcing this new edition of a well-known book, it is only necessary to state that the whole subject has been brought down to 1873, and that two new lectures have been added.

GLEANINGS FROM OUR EXCHANGES.

DETERMINED SUICIDAL MELANCHOLIA (*Edinburgh Medical Journal*, November, 1874).—Dr. Joseph J. Brown reports the case of a physician, æt. 25, who was admitted to the Royal Edinburgh Asylum in consequence of intense suicidal melancholia. He had always been healthy, was a hard-working and successful man, and, with the exception of one cousin, there had never been any insanity in his family. After experiencing a severe disappointment, he began to complain of headache and sleeplessness, then had delusions that his soul was lost and that it was a crime for him to live any longer, and finally tried to poison himself by refusing food, and by taking belladonna. He was then sent to the asylum, and, at intervals of a few days, tried to kill himself by pushing his finger down his throat; by eating berries of *arbor vitæ*, which caused nausea and diarrhoea; by swallowing small stones to the number of eighty-two, weighing twenty-four ounces, which were all evacuated; by taking an overdose of whisky, and afterwards some poison, whose character was undiscovered, but which produced coma, intense depression, general tremors and convulsions, and required the most energetic stimulation to counteract. A few days later, while an attendant was painting liquor gutta-perchæ over an excoriation upon the patient's sacrum, he snatched the bottle, and swallowed, as nearly as could be ascertained, about two ounces of the mixture. He soon became comatose, respiration ceased, the radial pulse grew scarcely perceptible, and nearly all evidences of sensibility disappeared. The pupils contracted, and were insensible to light. The face was flushed, the conjunctivæ injected, and the muscles flaccid. Artificial respiration was at once resorted to, and the stomach was thoroughly washed out with tepid water. Hot bottles were applied to the feet, warm blankets to the body, and an enema of strong coffee with brandy was administered. Cold water was dashed in the face, and the galvanic battery was employed, artificial respiration being kept up continuously. Total suspension of the respiration existed for two hours and three-quarters, and profound coma for nearly twelve hours, during which time he experienced several relapses, ceasing to breathe, and becoming greatly cyanosed. At these times ecchymoses appeared on various parts of the surface. Enemata of hot beef-tea, beef-tea and brandy injected into the stomach through a tube, galvanism, and artificial respiration were the chief means em-

ployed to relieve him, and were finally successful. The heart throughout the whole remained steady and regular in its pulsations, though it was diminished in force. It was observed that when the stimulation by the battery was too long continued or too energetically applied, the patient grew more comatose afterwards, so that intermissions of ten minutes or more were rendered necessary.

ANOSMIA (*The Lancet*, October 31, 1874).—Dr. Hughlings Jackson is convinced that loss of smell is a symptom which does not receive the degree of attention it deserves. We are rarely consulted for anosmia, since loss of smell is not so important a defect as loss of sight or of hearing is. But anosmia is just as *significant a symptom* as amaurosis is, and if the patient who is anosmic has also severe and continued pain in his head, and urgent vomiting, the symptom thus qualified would point to local coarse disease—*e.g.*, tumor, syphiloma, etc.—inside the head, quite as strongly as amaurosis (from optic neuritis) in the same association would do. Another thing to be considered is, that just as optic neuritis may exist when the patient supposes his sight to be quite good, so the presumption is that olfactory neuritis may exist when the power of smell is not obviously diminished. Again, it must not be concluded that anosmia depends on disease actually involving or pressing on the olfactory bulbs, any more than we must conclude that amaurosis from optic neuritis depends on disease involving the optic nerves, optic tracts, or corpora quadrigemina.

So-called "subjective" sensations of smell are occasionally warnings of epileptoid seizures; they are rarer than subjective "auras" of vision, but commoner than auditory auras. They occur in cases where the patient has no smell in the ordinary sense of the expression. They are presumably analogous to the colored vision of amaurotic patients, for patients who are blind are not always in darkness; they are, for example, sometimes in "redness."

KOUMISS (*Chicago Medical Journal*, November, 1874).—Dr. De Wolf, in an interesting article on the subject of koumiss, or fermented mares' milk, refers to its mode of preparation by the Tartars, who, in order to obtain the milk in sufficient quantity, are accustomed to separate the foal from the mare during the day, allowing it to suck only at night. The mare's milk is kept in a bag made of horse's hide undressed, which by smoking acquires a degree of hardness. Its shape is conical, somewhat triangular, from being composed of three different pieces set in a circular base of the same material. The sutures, which are made with tendon, are secured by a covering on the outside with a doubling of the same skin closely fastened. These bags are used both for the preparation and transportation of koumiss, and have a dirty appearance and disagreeable smell.

There is no doubt that koumiss has great therapeutic value, and the legitimate and rational indications for its use are apparent to the practical physician. It cannot be a specific in phthisis, but it may be of immense service in counteracting the disturbed and degraded nutritive changes which predispose to it, while it certainly supplies a food peculiarly adapted to conditions of exhausted vitality, emaciation from any cause, and the gastro-intestinal affections of children. In brief, it must be accorded a high place in the series of plastic nourishments.

The quantity of koumiss advisable to take in commencing its use should not exceed one champagne bottle daily for an adult, and even that amount sometimes produces a slight febrile reaction. If headache occurs, it should be suspended for a day or two; but in a short time a toleration is generally established, and the patient soon discovers how much he can take, and then he may live entirely upon koumiss, or, when the

stomach will tolerate other food, it may be added. It does not interfere with any other course of treatment. The secretion of urine is generally much increased. When a tendency to constipation exists, the fresh product should be used, but if diarrhœa is troublesome, an older sort should be taken. A piece of stale bread or cracker, eaten immediately after drinking, will relieve the fulness of stomach sometimes complained of.

The desire for sleep generally experienced after drinking koumiss should be regarded as beneficial, and should not be interfered with.

MISCELLANY.

THE AMERICAN MEDICAL ASSOCIATION.—"Our main objection is that the men who govern the Association and attend its meetings are far from fair representatives of the profession; that, consequently, the proceedings lack the dignity and discretion, and the papers, for the most part, the merit, that should characterize such a body. We cordially admit the former merits and services of the Association, as well as the high standing and character of its former leaders and supporters; but it has woefully degenerated."—*Boston Medical and Surgical Journal*.

DIAGNOSIS OF DEATH.—Dr. Monteverdi, of Cremona, has proposed a simple, easy, and certain method of seeing whether a person is really dead. He injects a drop or two of ammonia beneath the skin. If the person be dead, no effect, or next to none, is produced; but if the person be alive, a red color appears at the point of the injection. He has published a pamphlet on the subject, illustrated with six plates, and the plan, simple as it is, seems likely to be useful, to prevent the possibility of burying alive.

ACCLIMATIZATION OF IPECACUANHA IN INDIA.—The *Pharmaceutical Journal* notes that in the last report of Dr. King, Superintendent of the Calcutta Botanic Gardens, he states that the propagation of the ipecacuanha plant by root and leaf-cuttings has been so successful that there is at present a stock of 63,000 living plants; whereas, four years since there were at the Cinchona Gardens but twelve cuttings, of which seven were afterwards accidentally destroyed.

THE next Triennial Prize of £300, under the will of the late Sir Astley P. Cooper, Bart., will be awarded to the author of the best essay or treatise on "The Anatomy, Physiology, and Pathology of the Sympathetic Nervous System."

THE French Government is stated to have forbidden pilgrimages of the Algerian Mussulmans to Mecca, on account of the plague which prevails in some of the cities on the route, and the Egyptian authorities are stated also to have determined that no convoys of pilgrims shall leave Suez.

THE students at St. Petersburg are stated to be in rebellion against Prof. Cyon on account of the strictness of his examinations.

No less than 100,000 leeches are said to be required annually by the French military hospitals. The supply for the next three years has just been contracted for, at an average price of 125 to 135 francs per thousand. *

THE PHILADELPHIA MEDICAL TIMES,—one of the ablest and most independent of medical journals.—*London Medical Record*.

NOTES AND QUERIES.

LENS-TESTING, NO. 2.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Will you permit me to append a few explanatory notes to a letter in the *Times* of December 26, from your semi-anonymous contributor "J. G. H."?

This half-ashamed correspondent, whilst lurking behind these initials, inadvertently betrays himself by saying he is complimented in my paper of November 28, which, by the way, consists of unpretending "Notes on the performance" of two lenses, and claims to be no exhaustive report of their "testing." Since only one American's name beginning with H occurs in that article, I, of course, recognize my "friend" as J. Gibbons Hunt, M.D., advertised here and in New York as "Professor in the Woman's Medical College of Pennsylvania."

In the first place, allow me to explain that the possessive pronoun *my*, applied to the one-twenty-fifth and one-fiftieth, is so employed by Dr. Hunt and myself to avoid the inelegant repetition of proper names. Thus, Dr. H. says, "If my one-fiftieth resolves the Amphipleura,"* etc., meaning, of course, "If the one-fiftieth loaned to me by Mr. Charles Stodder resolves," etc., and not designing to dupe your readers into thinking he owns a high-power lens. Otherwise this statement would be, under the circumstances, a dishonorable wearing of borrowed plumes, or rather (since these lenses are "not achromatic"), a piratical sailing under false colors, which the learned "Professor" would indignantly scorn.

Respecting my trivial suggestion in reference to mounting podura scales, diatoms, etc., for testing high powers, I would remark that Dr. H., in his overflowing generosity and thankfulness, gives me quite too much praise. In reality, I made no more claim to being the first who proposed the use of mica than to precedence in employing very thin glasses "if they can be procured," and the only credit I deserve is on account of devising a plan for utilizing these materials, after Dr. Hunt gave them up in despair (vide *Medical Times*, loc cit.).

Dr. Hunt's warm gratitude to me for teaching him how to focus a Bacterium, and how to prepare specimens for high powers, crops out so frequently in his essay, and so evidently springs from a very tender spot in the deepest recesses of pardonable vanity, that many strangers might underestimate his actual acquirements. To avert this injustice, permit me to assure you that in illuminating test-diatoms, or in staining and *celling vegetables* (such as his favorite and emblematic Nettle), my friend Dr. Hunt can probably equal if not surpass any microscopist in the Union; and whilst such prickly laurels adorn his brow, what need he care for his incapacity to define paltry Bacteria, or to produce any scientific papers which shall command that recognition from the medical "journals of this and other countries" to which he so feelingly alludes?

Dr. H.'s last paragraph of fervid eloquence charges me with telling almost the *naked truth*, or at least with coming as near that unclothed deity as poor human nature usually attains. But, Mr. Editor, my long (and much) tried friendship with Dr. Hunt enables me to declare that he did not intend to say anything of the kind, and that he never would have even seemed to make such an indecent accusation, had he not been blinded by his dazzling vision of the "immortal goddess," in all her unrobed majesty divine.

After all, is not the truth about which we have held this friendly discussion nearly as follows? The wonderful displays of lines and dots by Diatom students, interesting as they are, have about the same relative value to the real work of histologists and pathological anatomists which the delicate web of a spider has to the most useful products of our mills and looms; and the small, but positive, merit of my brief "notes" is that they give a faithful record of results obtained by an honest worker, *with*

* Phila. Med. Times, vol. iv. p. 826 (report of remarks written out by Dr. H. himself, and MS. now in my possession).

"improved tools," in the peculiar province of the Arachnidæ (among whom my friend Dr. Hunt stands pre-eminent), and this without having spent a long and "useless" lifetime in the acquisition of their crafty tricks.

JOSEPH G. RICHARDSON.

3729 LOCUST STREET, PHILADELPHIA,
December 26, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I am very glad that order has been evolved from chaos, and that we need no longer trouble ourselves about primordial elements and their relationships. Perhaps the Cincinnati Genesis needs confirmation: therefore I send you a gem printed in *Harper's Bazar*, which is too good to be lost. Please insert, that no links may be missing.

Yours, respectfully,

W. H. WINSLOW, M.D.

DARWINISM IN THE KITCHEN.

I was takin' oft my bonnet
One arternoon, at three,
When a hinseck jumped upon it
As proved to be a flea.

Then I takes it to the grate,
Between the bars to stick it;
But I hadn't long to wait
Ere it changed into a cricket.

Says I, "Surely my senses
Is a-gettin' in a fog!"
So to drown it I commence,
When it halters to a frog.

Here my heart begun to thump,
And no wonder I felt funky;
For the frog, with one big jump,
Leaped himself into a monkey.

Then I opened wide my eyes,
His features for to scan,
And observed, with great surprise,
That that monkey was a man.

But he vanished from my sight,
And I sunk upon the floor,
Jest as missus, with a light,
Come inside the kitching door.

Then beginnin' to abuse me,
She says, "Sarah, you've been drinkin'!"
I says, "No, mum, you'll excuse me,
But I've merely been a-thinkin'."

"But, as sure as I'm a cinder,
That party what you see
A-gettin' out o' winder,
Have developed from a flea."

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society will be held at the Hall of the College of Physicians, Wednesday, January 13, 1875, at 8 o'clock P.M.

Dr. William Goodell will read a paper on the "Management of Head-last Labors."

The medical profession in Philadelphia are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 29, 1874, TO JANUARY 4, 1875, INCLUSIVE.

WHITE, R. H., ASSISTANT-SURGEON.—Relieved from duty in Department of the Gulf, and to rejoin his proper station in the Military Division of the Atlantic. S. O. 278, A. G. O., Dec. 30, 1874.

JACKSON, D., ASSISTANT-SURGEON.—Assigned to temporary duty at these Headquarters. S. O. 199, Department of Texas, Dec. 21, 1874.

SKINNER, J. O., ASSISTANT-SURGEON.—Relieved from duty at the Presidio, and to comply, without delay, with Par. 3, S. O. 260, A. G. O., November 30, 1874. S. O. 159, Department of California, December 22, 1874.

SATURDAY, JANUARY 16, 1875.

ORIGINAL LECTURES.

ON THE PRINCIPLES WHICH GOVERN THE USE OF ELECTRICITY IN MOTOR PARALYSIS.

An Abstract of a Course of Three Lectures delivered at the University Hospital,

BY H. C. WOOD, JR., M.D.

LECTURE II.

IN my last lecture the laws of electrical science most important to the therapist were elucidated. To-day I shall consider the application of the force to the human body; and here, in the beginning, I shall assert, somewhat dogmatically, that in palsies the good effects obtained from galvanism are not due so much to the immediate action of the remedy as to the contractions of the muscles which it produces. It is true that some advantage is derived from the direct stimulation of the circulation in palsied limbs by the electricity, but the amount of this benefit is comparatively so slight that we may for the present disregard it.

Let us then, to-day, in the first place, determine, if possible, in what way muscular contractions are produced by electrical currents, and the best method of developing them in the healthy muscles.

When a moderately strong current of galvanism is passed along a certain length or portion of a nerve, there appear between the two poles two zones of disturbed nerve-function, separated by a neutral point at which the nerve retains its normal condition. In the neighborhood of the positive pole the irritability of the nerve, and also its power of transmitting impulses, are diminished, whilst in the proximity of the negative pole these nerve-attributes are increased: to the condition of diminished activity the name of *anaelectronous* has been applied, whilst that of increased activity has been called *kataelectronous*. Thus, in the accompanying diagram, *nn* equals the nerve; $+p$ and $-p$, the



positive and negative poles respectively; *np*, the point at which the function of the nerve remains normal, with the zone of anaelectronous on one side of it, and that of kataelectronous on the other. The longer the current continues, and the more intense it is, the more does the zone of anaelectronous gain upon that of kataelectronous, or, in other words, the more closely does the neutral point (*np*) approach the negative pole ($-p$). Consequently, when a strong current has passed for a length of time through a nerve, the zone of kataelectronous is a very short one, confined to the immediate vicinity of the negative pole.

When the particles of a motor nerve pass from a state of inertia to one of motility,—i.e., from one

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of diminished to one of increased excitability,—the nerve is momentarily excited, and gives origin to an impulse. Therefore, when anaelectronous disappears in a nerve,—i.e., when a condition of diminished activity becomes one of normal activity,—an impulse is generated just as certainly as when kataelectronous—i.e., increased functional activity—appears in a nerve previously normal.

Suppose, in the accompanying diagram (first



figure), *cn* represents a nerve, and *m* the muscle to which it is distributed. If, then, a downward current be applied to this nerve, it is plain, $+p$ being the positive pole and $-p$ the negative, that *a* will be the zone of anaelectronous, *np* the neutral point, and *k* the zone of kataelectronous. When the circuit is closed in obedience to the law already enunciated, an impulse starts from *k*, and, in order to reach *m*, has to pass only through the stretch of normal nerve between $-p$ and *m*. Therefore this impulse of circuit-closure reaches the muscle unimpaired.

Again, when the circuit is broken, the impulse which is generated in *a*, in order to reach the muscle travels only through the zone *k*, whose conducting-power is increased, and a portion of normal nerve; consequently it also reaches the muscle unimpaired. It is plain, then, that with *descending currents strong movements must be induced, both at the making and at the breaking of the circuit.*

With *ascending currents* the results are different. Thus, in the lower figure of the above diagram, *cn* = nerve; *m* = muscle; $+p$ = positive pole; $-p$ = negative pole; *np* = neutral point; *a* = zone of anaelectronous; *k* = zone of kataelectronous. Now, it is plain that the impulse generated in *k* at the closing of the circuit must pass through *a*, the zone of diminished conducting-power, in order to reach *m*. Consequently, with the ascending current the contractions of circuit-closure are very feeble, or are altogether wanting. When, however, the circuit is broken, the impulse generated in *a* reaches the muscle *m* unimpaired.

Without occupying more space with a discussion of the subject of electrotonus, but contenting myself with the statement that these facts and reasonings apply especially to such currents of moderate strength as are with propriety employed in therapeutics, it is plain that descending currents ought to be more efficient in inducing contractions than are ascending currents. What science thus has discovered, clinical medicine has also found out: descending currents are in practice more powerful than ascending currents, as I shall take occasion to show you repeatedly in the course of the winter.

From what has been already said, it is so evident as scarcely to need further demonstration that the breaking of a current running in one direction must render the nerve more sensitive to the closure of

a current running in the opposite direction, but less sensitive to the closure of a current running in the same direction; for when the currents pass in opposite directions analectronous suddenly becomes kataelectronous,—i.e., that which was below normal suddenly becomes above normal, whilst with parallel currents analectronous remains analectronous.

To make this more clear, however, let us use the following diagram. In it the letters have the same



significance as in those previously used, whilst the arrows on the side of the lettering represent the direction of the current to which the lettering applies.

The downward current is supposed to be broken, and to be followed instantly by the upward: of course the upper, *a*, changes into *k*, and a doubly powerful impulse is sent down to *m*. Now the upward current is broken, and the downward sent through the nerve; at once the lower *a* becomes *k*, and *m* receives again a doubly powerful impulse.

The practical application of this reasoning is a very apt one. It becomes, in the first place, very plain why the secondary to-and-fro current of the induction coil has so much more power over muscles than has the primary induced current or the chemical current, as ordinarily applied.

If, however, instead of the chemical current being simply interrupted, its polarity be suddenly reversed at brief intervals, all the effects of the to-and-fro induction current upon healthy muscle are obtained. More than this, for reasons to be hereafter adduced, in certain muscular paralyses I have found that muscles which fail to respond to all other currents respond readily to a very slow to-and-fro chemical current.*

Having obtained an idea of the manner in which galvanic currents produce muscular contraction, it certainly is next in order to study the proper methods of applying those currents. When the poles of a battery of sufficient power are brought into contact with the human body, as every one knows, the current forces its way through, but it is of the utmost importance to determine by what route or routes it passes. The body as a galvanic conductor is governed by ordinary physical laws, and consequently some knowledge of these laws is a necessity to the electro-therapeutist.

If a current be passing along a homogeneous conductor, such as a wire of iron, of copper, or of other metal, and that conductor splits up into a

number of branches, the current also divides, as is illustrated in the accompanying diagram. If these



branches, being of equal size and length, offer an equal resistance, the current divides equally; but if the size or length, and consequently the resistance, of the branches be unequal, the division of the current is unequal; the law being that the strength of the current in each branch of the conductor is inversely proportional to the resistance of that branch. This law is as applicable to conductors composed of many substances as to those composed of a single substance; but then the resistance in a branch depends upon the specific resistance of the substance of which it is composed, as well as upon its size and length.

In applying these laws to the passage of galvanism through the body, it must be borne in mind that the dry skin offers an enormous resistance to the passage of the current, so that practically none of the latter will pass along it. On the other hand, when the skin is thoroughly wet with salt water it allows the current to pass through it readily.

Let us suppose, then, that in the following diagram $+p$ and $-p$ = wetted poles; *ss* = skin,



with the tissues below it. It is evident that, if the tissues were a uniform mass, the current, passing through the skin as a solid bolt, would break up into an infinite number of curved currents, which would meet and pass through the skin again as a solid mass at $-p$. It is equally plain that, of these sub-currents, those whose course was nearest the straight line from $+p$ to $-p$ would be the shortest, and would, therefore, meeting with the least resistance, be the strongest, whilst as the curve and consequently the length and the resistance increased, the strength of the current would diminish until it became practically null. In this imaginary case, the tissue beneath the skin has been supposed to be homogeneous: in actual life the tissue never is homogeneous, and the resistance of the different constituents varies very much. Consequently, the strength of the subdivisions of the current is greatly modified: those branch streams being increased which run along or through tissues that conduct readily, and *vice versa*.

By remembering these facts, we are enabled to apply electricity as closely as may be to any desired

* I am indebted to my friend Mr. Otto Flemming, electrician, of this city, for inventing, at my suggestion, an automatic commutator or polarity changer, enabling the operator to obtain a regular to-and-fro chemical current. The following brief technical description of it may enable any one desirous of making one to understand the mechanism.

The clock-wheel gearing into a train of wheels of an ordinary clock is fastened on a shaft, to which are also attached three insulated metal disks, the two outside ones of which, by means of light springs sliding on them, conduct the current direct from the battery over the centre disk, which, consisting of two metal halves, conducts either pole of the battery, when the clock-work is in motion, alternately to the springs, and thence to the electrodes.

portions of the body. Thus, if it is intended to affect as exclusively as possible a certain spot or minute portion of a nerve, a well-wetted small electrode is passed directly over this portion, and, especially if the latter be somewhat deeply situated, pressed down firmly, so as to condense the tissues as far as possible into a homogeneous mass, whilst a large wet electrode is placed at a small distance from it in a situation which the anatomy of the part will readily suggest. The following diagram will perhaps illustrate this point more clearly than will many words.



It is evident that the spot directly under the small electrode will receive the full strength of the current, which is directly afterwards so broken up as to affect very slightly any other part.

The practical importance of a knowledge of these laws is very evident. Thus, suppose it is desired to pass a current through some length of a nerve; it is evident in the first place that two small electrodes should be chosen, and that they should be well wetted and pressed firmly upon the trunk of the nerve at the two ends of that portion which is to be affected.

Again, in applying electric currents to muscles it is found that if the currents be sent through the body of the muscles, only very imperfect and partial contractions occur, unless indeed the current be an excessively strong one. Duchenne was the first to discover that when one pole is placed over spots or points in the muscle, violent general spasms of the muscle are produced by currents usually too feeble to elicit a distinct response. To these places the name of *motor points* has been given. These motor points correspond to the position at which the supplying nerve enters the muscle.

As the therapeutic value of a current in paralysis depends not so much upon its direct influence on the muscle as upon the contraction which it causes, it is plain that the current ought to be sent through the motor points. This is evidently best accomplished by using one small well-wetted electrode pressed firmly over the motor point, and another large sponge electrode placed at some little distance from it, in the manner which has already been explained.

We have now, gentlemen, been over all those points concerning the relations of galvanic currents to healthy muscles, and are ready to study their relations to diseased muscles.

If a muscle by destruction of its supplying nerve be cut off from all spinal influence, it rapidly undergoes a degeneration. In the course of a very few days it will be found upon testing that it no longer

responds to a rapidly interrupted faradic current, but does respond to such current when slowly interrupted; a couple of days later, and the muscle fails to contract to the most powerful and most slowly interrupted induced currents. When, however, the continued current is applied, and is very slowly interrupted; or, better still, if it is reversed at intervals of one or two seconds, contractions are produced. It is this fact which has led to the belief that there is some intrinsic and inscrutable difference between the induced and the chemical currents. But, gentlemen, remember that time is an element required for the propagation of any force. If you pass your hand rapidly through a flame, the latter is not felt; if the hand move more slowly, a sensation of warmth is perceived; if the motion be still slower, this sensation becomes pain. Now, if the hand be partially anæsthetic from disease, in order for the sensation of warmth to be perceived motion must be much slower than in the first instance. In other words, more time is required for the partially paralyzed sensory nerve to perceive heat than for the normal nerve to do so. What is true of the sensory nerve is true also of the motor nerve. It does not respond so quickly to stimuli when partially paralyzed as when normal. The muscle first loses its power of responding to those galvanic currents which are excessively rapid, then to those which are less so, and finally to all induced currents, because from their very nature these currents, even when slowest, last but a fraction of a second. The chemical current may be continued for any length of time at the will of the operator, who is thus enabled to act upon a muscle whose nerve has become so insensitive that it fails to perceive the flash of faradic galvanism.

Some of you, no doubt, are already saying to yourselves, This is all very pretty theory; but what proof have you? The proof is this: when a chemical current is rapidly interrupted it is no more able to affect these abnormal muscles than is the faradic current. I have observed this over and over again in the clinic, and am fortunate enough to be able to demonstrate it to you to-day on two cases.

This man is suffering from a palsy of about one week's standing, due to the pressure of exudation upon the facial nerve. I now apply the electrodes of a very powerful faradic battery, and, though the man winces from the pain, yet not one of the affected muscles moves. I now substitute a rapidly interrupted chemical current from forty cells, but still no effect is perceptible. I will not move my electrodes (which are really on the motor points), but let the assistant stop the interruptions and himself break the current about once in two seconds. You see now how the whole side of the face jerks. (A demonstration on the second case, a child suffering from very recent infantile paralysis, yielded similar results.)

DEATH FROM CHLORAL HYDRATE.—The death of a young man is recorded in the *Canada Lancel* for December, as following in about twenty minutes the ingestion of about three drachms of chloral.

ORIGINAL COMMUNICATIONS.

CLINICAL NOTES AND REFLECTIONS.

BY WILLIAM HUNT, M.D.

MEASURING.

WHAT hospital surgeon has not fretted over a fractured thigh that would not come down or do as he wished it to do? Time and again he measures, and his assistants also do it, but things will not come right, and no two agree exactly in their opinions as to the same case. All points of departure are taken,—sterno-clavicular junction, umbilicus, anterior superior spine,—and all with the same results. Light has suddenly broken in, at least upon us at the Pennsylvania Hospital, as to these difficulties. It is well known that bilateral symmetry may be said not to exist as to breadth,—but has it ever occurred to any one to state as a law that *bilateral symmetry as to length is exceptional*? That is, most people are longer on one side than on the other.

Dr. Cox, formerly resident of the hospital, and Dr. Morton's assistant, noticed these discrepancies and measured both sides of a large number of persons who had never received any injury whatever to their lower extremities, taking his points of departure from the various positions on the trunk above indicated. I have his full permission to state that the differences between the two sides ranged from seven-eighths of an inch to nothing, and that the latter result was exceptional. The doctor has also the data as to right and left, and the result will soon be published. If this statement holds good, how many heretofore puzzling things are explained, and what a nut to crack for those who dogmatically assert that a man with fractured thigh *must* be cured without shortening! Let us put it in this way: his limb *should* be cured so as to be as nearly as possible what it itself was before the injury was received. We must combat the shortening from overlapping, but we need not put the patient to torture in striving to force one side to be exactly like the other. I have never known the really forcible practice of treating fractures to do well. The muscles or the patient himself will be sure to rebel, and the results will not be as good as were hoped for. These facts explain what I have not unfrequently experienced. I have been much annoyed, for instance, by a thigh-case showing too much shortening while the patient was in bed. All would seem to be right at the point of fracture; but, when compared with the other side, the measuring was unsatisfactory. On getting up, however, the patient would show but very little difference, and after a little practice he would walk with scarcely a limp, or with none at all. These observations also explain, to a great extent, the varying gaits of different people who have never met with injury.

Wherein do these differences in the two sides lie as to the lower extremities? Hyrtl says the right arm is longer than the left by from two to three lines, but that the lower extremities are equal in

length. I have made a few measurements on the skeleton, and can confirm this statement, and, therefore, think that the variation is mostly an acquired one, and that it is dependent upon the carriage of the trunk, through occupation or habit, altering the direction of the spinal column. At all events, we know that quiet, well-formed, and healthy children, when they are the subjects of fractured thigh, do not present the same difficulties as to measurement.

This question of bilateral symmetry is one of great interest, and, so far as I know, it is by no means exhausted. We are right-handed simply because the right side is more developed in uterine life, it may be to accommodate the liver, and at birth it is the stronger. Hence the infant begins at once to use his right arm at the expense of the left. I think, if we could have the early history of a left-hander, we would find that some extraneous cause, say a hurt or some habit of nursing, restrained the free use of the right hand. Ambidexterity, I think, is altogether acquired. Dr. Leidy has suggested that if it exist naturally anywhere we should find it among the Indians, and he intends to make some inquiry about it.

I do not know what the received ideas of aphasia are at present, but I have never subscribed to the doctrine of a left centre, believing that it is only more developed than the other, in accordance, it may be, with its connection with the right side of the body. Anatomy and physiology alike are, in any organization practically symmetrical, against a unilateral centre for a bilateral function.

TEN-YEAR SURGERY.

It has often been said, "How instructive it would be if our old patients were to present themselves to us for examination after ten years or more had elapsed since they were under care!"

I am able to report two cases of great interest that more than average this requirement as to time.

In *Hays's Journal* for April, 1865, I gave a detailed account of a case of match-maker's disease, or phosphorus-necrosis. I removed the whole of the right side of the jaw, all of the symphysis, and part of the left side. The peculiarities of the case were, that I operated altogether by internal incisions, and saved the periosteum by pushing it from the bone with the blunt-edged elevator of the trephine-case. Before the anterior muscles and membrane were detached from the symphysis, the tongue was secured from being swallowed by passing a ligature through it and looping this around the ear.

In November, 1874, a man was admitted into Dr. Morton's ward for this disease in the upper jaw. It was found that he came from the same establishment where my patient was formerly employed, and he was able to give his address. My man was found, and kindly came to the hospital and was shown to the class by Dr. Morton along with the new case. He was in perfect health. A new, well-formed, somewhat contracted, firm, and undoubtedly bony jaw occupied the place of the old diseased structure. The man had no difficulty in eating anything. His beard concealed all unevenness of feature, which was not very great. What

particularly interested and surprised me was the *shape* of the new part. Instead of there being a mere curved line of hard substance leading from the condyle forward, there were *ramus, angle, body, and symphysis*, as though the new bone had been cast into a periosteal mould.

While preparing this article for the *Times*, a man walked into my office with a freedom that suggested *nothing about eyes*, and said, "Are you Dr. Hunt? I have never had a good look at you, and wish to see you. I am here on business, and am going away to-night. I owe you much, and will never forget you; *but may-be you can do something more for me*. Do you remember S—, of Illinois, upon whose eyes you operated at Wills Hospital in 1858?" I said, "Certainly I do." "Well," said he, "I am the man." Now, I am not going to relate here an ordinary case of successful cataract-operation; but the history is this. S. was the son of a farmer; was fourteen years old when he was brought to Wills. He was practically blind from birth. There is some discrepancy in statement as to the early condition of his eyes; but, at all events, he had no recollection of ever having seen. He was healthy in other respects; had never been to a school for the blind, but was bright, as people usually are who have to feel their way through the world. Dense white capsular cataracts occupied the pupils of both eyes. There was great nystagmus or oscillation of the eyeballs. The boy was etherized, and I performed extraction, making the corneal incisions with a lance-shaped knife, and removing the cataracts with the fine hooks and forceps of the eye-case.

The bodies of the lenses, if there had ever been any, were absorbed, as the opaque material seemed to be merely thick membranous substance.

The boy did well, the wounds healing nicely; but when we exposed him to light we found that we had a veritable Casper Hauser to observe! He was a grand confirmation of touch being the master-sense and the only one by which we originally establish our relations with the external world.

He could have given a direct answer to the question of Molyneux to Locke, "Whether a blind man who has learned the difference between a cube and a sphere by the touch can, on being suddenly restored to sight, distinguish between them by the aid of the newly-acquired sense only?" Locke answered, theoretically, No! S. answered, practically and decidedly, No! He obtained no knowledge at first, by the eyes, of shapes, distances, sizes, extension, or consistence of objects; of color, of course, he had no idea. Everything, distant or near, appeared to be striking against him, or to be within him. Restrain his arms and hands, and he stumbled about worse, if anything, than before he was operated upon. Encouragement would cause him to move with care, but he was very much afraid. In fact, his sensations were more painful than pleasant, notwithstanding the good promise of the operation. He had to learn as a babe learns, who, in early life, grasps with equal confidence for the moon or its mother's breast. Its early days are occupied with a constant automatic struggle in correcting, by the

touch, the deceit of the eye. By-and-by experience settles the question, and it soon gives up its vain endeavors.

The nystagmus in S. continued, and doubtless added to his confusion of vision. In this condition his father took him home. I heard of him now and then as making some good progress, and then lost all knowledge of him. And now, on the 3d day of December, 1874, he walks into my office. His sight is good for all ordinary purposes; the nystagmus is gone, he distinguishes shapes, sizes, distances, and color without difficulty. He told me he was a long time in learning how to see, and at eighteen he went to school and learned to read with ease.

Dear me! when will people be satisfied? I said in the beginning of this note that he wanted me, if possible, to do something more for him. Well, he said he was a herder in winter on the prairie, and he now could not see a horse more than half a mile off, and he would like some far-reaching glasses so as to be able to take in six hundred head of cattle at once!

I was fortunate enough to find Dr. W. F. Norris at home. The doctor soon fitted him with the stretchers, much to his delight; and, as the train did not start till evening, he agreed to go to the University Hospital, where he was shown to the class.

Such incidents as these are very pleasant. I wish all that might turn up on the ten-year plan, as the insurance men say, could be so gratifying. I often wonder what becomes of them. May-be it is as well as it is. If another trumpeter were to blow the assembly for our cases, the muster might make us anxious to lay down our own horns.

CONSERVATISM.

A brakeman was brought into the hospital, who had fallen from the roof of a car while the train was in motion. He was perfectly unconscious; there was no fracture of the skull, but a lacerated wound of the scalp. There was vomiting of blood, which may have been swallowed. The left arm was completely crushed from the hand up to above the elbow. There was a fracture of the right radius, a large laceration near the right knee, and contusions generally. The shock was profound, and the case seemed hopeless. Restoratives were administered, and some reaction occurred, but there could be no thought of an immediate operation.

The patient could swallow liquids, and took nourishment in this form, although unconsciously.

Contrary to expectation, he continued to live, but delirium lasted for two weeks; there was great restlessness, and the broken right arm was tossed about as in a case of chorea.

In the mean time the left arm had become gangrenous, and the line of demarcation was forming. Consciousness returned partially at times. As there seemed to be a slim chance of the man's pulling through, the question was put to me by my assistant, Dr. A. V. Meigs, "Why don't you operate?" "Because," I answered, "if this man gets well at all, it is to be by a *natural amputation*. I shall simply remove the dead fragments as they separate, and

do not intend to touch him with a knife. His condition in other respects precludes it." "What do you gain by this procedure?" "I save injury to, and hemorrhage from, blood-vessels which are now sealed, and, above all, I save secondary shock from injury to great nerves, and thus perhaps we will save life also."

The plan laid down was strictly followed. The man was nourished, and in time I removed the gangrenous limb and fragments of bone. Some exuberant granulations were trimmed off, but neither skin nor muscles, great artery nor nerve, were touched with a knife. Recovery took place, with, in surgical parlance, a "beautiful" stump. (I never could see the beauty in these things; but language is imperfect.)

The patient also slowly recovered from his other injuries. His radius, from the tossing about in his delirium, was not united when he left the house, but he nevertheless had a very useful arm.

Now, the refreshing part of this case is this. During the progress of it I was actually reported to the managers of the hospital by some of the man's friends and minor railroad officials for neglect, inasmuch as they thought I was *doing nothing* for him. A committee was appointed, and the matter was looked into and explained. The man himself did not know of these procedures until afterwards. He could well have said, "Save me from my friends." I said refreshing, but, on the whole, I think discouraging would be the better word.

ANALYSIS OF ONE HUNDRED CONSECUTIVE CASES OF LABOR.

BY CHARLES W. BROWN, M.D.,

Mansfield, Pa.

THE following notes are based upon one hundred cases of labor in succession, as they occurred in my practice.

There were twins, 2; single births, 98. The presentations were as follows: hand and arm, 1; brow, 2; foot, 1; vertex, 82; of which 67 were first presentations, 4 in the second, and 9 in the third. Of the children, 59 were males, and 43 females, of whom two males and two females at full term were still-born. There were 12 premature labors, of which 11 were still-births. Of the mothers, 64 were multipara, and 36 primipara. Forceps were used in six cases, podalic version in two. Cord about child's neck, 5. The nativity was—American, 92; German, 4; English, 1; French, 2; Swede, 1.

Prolapse of the cord. Case 26.—Age 35; a large, healthy multipara. I saw her after the labor-pains had been very hard for nine hours, and found a large sac of waters presenting at the vulva, the os fully dilated. I ruptured the membranes, and a large amount of liquor amnii escaped, bringing down a long loop of the cord, which I tried to replace by placing patient on her knees and breast; but the pains were so strong and frequent that all efforts failed. It was but a short time before the cord ceased to beat; in twenty minutes labor was completed, with a still-born child, which it was found impossible to resuscitate.

Placenta prævia centralis. Case 32.—Age 30; multipara; a large plethoric woman. At 8 P.M. I found that she had been flooding some during the day, and as the pains grew harder the hemorrhage increased. The os was dilated sufficiently to admit two fingers, the placenta presenting. The fingers were passed around gently, peeling off the placenta, and at the same time dilating the os; in a short time I succeeded in removing the placenta whole, and then passed the hand in, and, grasping both feet, brought them down, and delivered, as speedily as possible, a still-born child. The usual means of resuscitation were resorted to, but without success. The amount of blood lost was not large, and the patient made a rapid recovery.

Distorted pelvis. Case 49.—Age 20; a very small woman, who had hip-joint disease when a small child; the right leg is no larger than when five years old. After twenty hours of hard pain, the head was resting in upper strait; the os was rigid, but was forcibly dilated by the fingers, so that the forceps would pass through; they were applied with great difficulty, owing to the narrow, deformed condition of the pelvis, the right side of which was so contracted that the head had to pass directly to the left before descent could take place, so force was applied by the forceps in this direction. After two hours' steady work, using great force, and readjusting the forceps when rotation took place, and compressing the head as much as possible, I succeeded in delivering a male child weighing twelve pounds. It was thought that it could not be delivered without craniotomy, and my friend Dr. S. was summoned for this purpose; but labor was completed on his arrival. The woman made a good recovery. Measurements of this pelvis were not taken, but the forceps would barely pass when locked, so narrow was the transverse diameter.

Case 48 was reported in No. 106 of the *Times*.

Case 29.—A large, healthy woman, age 28; Swede; multipara. When I arrived, I found one child had been expelled while she was walking across the room, the child falling to the floor, breaking the cord. A lady who was present tied the cord, and cared for the little one. Finding that it had received no serious injury, I laid it to one side to be washed and dressed with its coming brother. On examination I found a hand and arm presenting. I passed the hand up between pains, grasped one foot, brought it down, and in a short time delivered the second healthy male child. There were two distinct placentas—one attached to each side near the fundus. Three years before, the woman had twin girls.

Case 15.—Age 20; primipara. When I arrived, I found the child expelled, lying in bed, dead. Two young women were present, and did not dare to remove the clothing to care for the child, so had let it lie until my arrival, half an hour after it was born. They said it cried when it was first expelled, and it had been allowed to lie there and suffocate.

Case 33.—The mother was 13½ years old; both she and the child did well.

Case 21.—The mother was 45 years old.

Case 40. *Mother's marks.*—Mrs. F., age 35; has had three perfectly-formed children. Natural labor; female child, with double hare-lip and double cleft palate. A girl eighteen years of age, who had a hare-lip, was employed to do house-work during the whole of gestation. Mrs. F. said she always dreaded to look at the girl, but had no idea that her child would be deformed. Whether this girl with hare-lip was the cause of the child's deformity, I shall not attempt to decide.

Remarks.—In all cases where the os is dilated or dilatable and the pains are weak, I am in the habit

of giving quiniæ sulph., gr. v, with ten to twenty drops fluid ext. of ergot; and where the os is not dilated, if the strength of the patient is failing, I give quinia every two hours to prevent exhaustion. When the os is found back towards the promontory of the sacrum, I introduce one or two fingers and draw it forward towards the pubis between the pains, and hold it there until it will remain. I do not support the perineum, as is recommended by many authors, but if the pains are very strong, and the perineum rigid, hot fomentations are used over the vulva, and sufficient pressure is put on the head during the pain to give time for the parts to dilate.

The placenta is delivered by passing the right hand into the vagina, using the cord as a guide up to the placenta, and placing the left hand over the uterus above the pubis and making gentle pressure with a kneading motion, at the same time, with one or two fingers of the right hand, starting the nearest edge of the placenta loose, and causing it to roll up and come endwise, instead of drawing on the funis and forcing it to be expelled sidewise. As the placenta is expelled, I follow down the womb with the left hand; by this means very rarely is any other force than the contraction of the uterus needed to expel the placenta.

Metritis and metroperitonitis occurred in seven cases. These were treated by full doses of morphia, aconite, veratrum viride, and an ointment applied to the abdomen of opii pulv. \mathfrak{z} i, camphoræ pulv. \mathfrak{z} i, adeps \mathfrak{z} ii; mix; with hot fomentations. No cathartics were given until soreness and tympanitis had all disappeared. No maternal deaths have occurred in my practice.

No anæsthetics were used. Patients did not complain of much more pain when instruments were used than with natural labor-pains.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

CLINICAL SERVICE OF FRANK HASTINGS HAMILTON, M.D.,

Prof. of Surgery at the Bellevue Hospital Medical College.

RUPTURE OF A LIGAMENT.

THE next patient is a laboring man, who was standing on his right knee with the back of the corresponding foot directed towards the ground, when a weight fell upon the back of his legs, causing a rupture of the anterior fasciculus of the external lateral ligament of the ankle-joint. This ligament is very feeble, and is easily ruptured. If the internal ligament is torn, the foot is apt ever afterwards to turn out; but the function of the external ligament is less important, and no deformity is likely to ensue. A few days' rest is all the treatment that is required.

ATROPHY OF THE PLANTAR MUSCLES.

This man came to me thinking he had rheumatism of the foot. When he took off his shoes the first thing I noticed was that he had a flat foot. "The hollow of his foot made a hole in the ground." Both of his feet were in this condition. The ligaments which support the lateral and antero-posterior arches of the feet had given way. Such a man could not walk well. He

would not make a good soldier. This condition probably gave a predisposition to the special malady under which he is now suffering; and in addition he has been working in a damp basement as a fireman. He now finds that his left foot is cold, and that he cannot sustain his weight upon the ball of the foot. It has no strength, but it is not tender and swollen. Looking at the bottom of this foot, I find that the plantar muscles are wasted. It is evident, therefore, that the foot is suffering from defective innervation. I recommend galvanism, and warmth.

ULCER UPON END OF STUMP—TREATED WITH WARM WATER.

I amputated this man's leg below the knee three or four years since. The wound healed kindly, and he has for some time worn an artificial limb, but recently he fell and tore open the cicatrix. A large ulcer now exists upon the end of the stump, with indurated edges. It is being treated with warm-water fomentations, under which applications the callous edges are disappearing, and the granulations are filling up the centre and base of the ulcer.

ACUTE ORCHITIS.

Here are two examples of acute orchitis, with some inflammation of the cord and of the epididymis in each case. In both cases, also, we notice, some serous effusion has taken place into the tunica vaginalis. It is of interest, also, to note the fact that in both of the cases the patients ascribe the inflammation to a strain in lifting. I have met with frequent examples in which the occurrence was ascribed to the same cause; yet it is not easy to explain why lifting should produce such results. The patients are being treated by rest in the horizontal position, suspension of the testes, and a tobacco-poultice. They are both improving.

DISLOCATION OF THE SHOULDER OF FOUR WEEKS' STANDING.

This woman claims that she is only forty-eight years old, but she is certainly fifty-eight. She is very fat. The dislocation is subglenoid. (Dr. Hamilton here called attention to the several varieties of shoulder-joint dislocations, and to the differential diagnosis. Especial emphasis was placed upon two points as distinguishing a dislocation of the shoulder from a fracture of the surgical neck of the humerus. First, Duga's test: placing the hand of the injured limb upon the opposite shoulder. If it is a dislocation, the elbow will project in front of the body; if it is not, the elbow will rest easily against the chest. Second, placing the hand over the acromion process, like a saddle, with the fore-fingers resting upon the front of the shoulders, while the thumb rests against the back, and then swinging the arm backwards and forwards: if the head of the bone is in the socket, it can be felt distinctly as it moves backwards and forwards.)

Several attempts have been made to reduce this shoulder, and she has just come from the dispensary, where, under ether, Dr. Bryant, an experienced surgeon, has made long-continued and varied attempts at reduction. She has scarcely recovered from the effect of the ether, and considering the age and condition of the patient, together with the amount of skill already employed, it seems probable that reduction could not be effected. At any rate, it would be proper to defer the attempt to a later day. If reduction were never effected, she would be maimed somewhat; yet often, in these cases, a very useful limb results.

PARTIAL MUSCULAR ANCHYLOSIS AFTER REDUCTION.

This man received a blow upon the upper end of the humerus, causing a dislocation into the axilla,—subglenoid. It was reduced promptly by Dr. Burge, of Brook-

lyn, the patient being anæsthetized. After several weeks he has called upon me, because a physician has told him it is not reduced. I find the head of the bone in its socket, but he is suffering from a certain amount of muscular ankylosis. He cannot lift the arm freely, in consequence of a contraction of the lower fibres of the pectoralis major and of the latissimus dorsi. He has kept his arm too long against the side of his body, and if he continues to hold it in this position the ankylosis will become complete. He must move it about freely, and some one must lift it up forcibly every day, even though it hurts him a little.

TRANSLATIONS.

ACTION OF THE BILE SALTS ON THE ECONOMY.—MM. Feltz and Ritter continue their interesting contributions to our knowledge of the bile in a communication bearing the above title, which was published in the *Journal de l'Anatomie et de Physiologie*, No. 6, Nov. et Déc., 1874.

After giving a detailed account of the exact and tedious processes employed by them in obtaining the glycocholate and taurocholate of sodium from ox-bile in a perfectly pure condition, and the process followed for the detection of the biliary acids in the blood and urine, they give at some length the general process for the analysis of these latter. They then describe their experiments in full. The first series included injections of a mixture of the biliary salts as they are found in ox-bile. These were dissolved in water in the proportion of twenty per cent. of the anhydrous salts, and small quantities were injected into the veins of dogs. From this first series of experiments it appears that the bile salts are very powerful toxic agents when injected into the blood in considerable quantity. The economy reacts energetically, and seeks to throw off the poison by every possible avenue. The exaggeration of all the secretions, the ptialism, the rhinorrhœa, the abundant urinary secretion, the diarrhœic stools, observed in the animals experimented upon, are thus explained. While nothing checks this elimination, the normal condition becomes re-established after some days.

The intoxication is manifested particularly by the alteration brought about in the blood, chiefly in the blood-globules. The latter are dissolved; the blood becomes diffuent, and the coloring-matter escapes with the urine. Intestinal and buccal hemorrhages are frequently produced, resulting from ruptures of the capillaries brought about by difficulties of the capillary circulation from modification of the blood. In some instances the coloring-matter of the blood becomes crystallized. The appearance of biliary coloring-matters and sometimes of indican in the urine is worthy of note.

It seems possible that the condition of granular and fatty degeneration observed in some cases may have been due to the gradual action of the poisons. In this respect poisoning by the bile salts resembles phosphorus-poisoning, but it is clearly differentiated by the absence of those muscular lesions so characteristic of the toxic action of this metalloid.

The symptoms which are observed in icterus, and which they have been able to reproduce, are cooling, diminution of the pulse, and some one of the modifications of the urine. They felt themselves justified, then, in supposing that a certain number of the phenomena observed in icterus should be attributed to the biliary salts,—notably the hemorrhage and convulsions.

Would it be rash to affirm that these accidents, which often appear in the course of icterus with formidable gravity, depend upon individual conditions which exaggerate the secretion or the retention of these salts?

They felt, besides, the more authorized in affirming this pathogeny of the graver accidents of icterus, since the lesions of the liver, the kidneys, and the blood are in great part those which are attributed by authors to icterus gravis. The mixture of the two salts having produced such a marked effect, the next point was to find whether this was due to the action of both salts in combination, or whether the active properties resided in one alone.

For this purpose the taurocholate of sodium, prepared by a process of which MM. Feltz and Ritter give full details, was employed. Injections were made into the veins of dogs as in the previous series of experiments, when it was ascertained that the same series of phenomena were induced as when both salts were employed.

Injections of glycocholate of sodium, made in a similar manner, gave rise to certain nervous symptoms, which might have been due to the effects of previous loss of blood.

In comparing these various experiments, say MM. Feltz and Ritter, the closest analogies may be observed between the action of the two salts in mixture and that shown by either one when employed by itself. Large doses rapidly injected always caused death; smaller doses provoked accidents which, formidable at first in many cases, rapidly disappeared when there was time for elimination to become established.

Calculation of the proportion of each dose to the weight of the animals showed that, in similar doses, the mixture of the biliary salts was more energetic than the glycocholate alone. The taurocholate was more active than the mixture of biliary salts.

Believing that it is not possible to deduce from physiological experiments made upon animals conclusions which can have high scientific value, the authors formulate the result of their experiments with considerable reserve as follows:

Taurocholate of sodium is more active than glycocholate; the mode of action of the two salts is identical—both decompose the blood-corpuscle.

Continuing their researches with the taurocholate of sodium, which offers better opportunities for study than the glycocholate, MM. Feltz and Ritter instituted a series of experiments with this salt injected in quantities so small as not to produce immediate accidents. The result showed decided modification of the humors. The quantity of urine diminished, coloring-matters of the bile, indican, albumen, and, occasionally, blood, appeared in it. The acidity of the urine diminished; in some cases it even became alkaline; the urea diminished sensibly, while the uric acid was increased. The animal's temperature became slowly reduced.

The blood was altered more or less profoundly, the corpuscle becoming deformed; the proportion of fatty matters and of cholesterin was augmented. Experiments made upon the gases contained by the blood showed that the biliary salts modify not only the form of the blood-corpuscle, but also its constitution; the hæmoglobin itself becomes altered, thus bringing about disorders of nutrition and circulation. X.

A CASE OF POPLITEAL ANEURISM IN A WOMAN CURED BY DIGITAL COMPRESSION AFTER FAILURE WITH CARTE'S COMPRESSORS (*Canada Med. and Surg. Jour.*, Dec. 1874).—Dr. John Reddy reports the case of a woman, æt. 59, who suffered from a large, sacculated popliteal aneurism. Carte's compressors were applied, and were retained for about seven weeks, with only slight good results. Digital compression was then tried, and in twelve hours neither bruit nor pulsation was distinguished. It was kept up for twelve hours more, and resulted in a perfect cure.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

BILLS.

WE have received several communications in regard to our editorial on professional bills. One correspondent from Boston sends us a blank form which he uses, and which he says is very commonly employed in that city. The front of the bill presents nothing unusual, but on the back of it is printed as follows:

THE BOSTON MEDICAL ASSOCIATION, composed of the regular physicians of Boston, adopted the following Fee-Table, July 1, 1864.

But it is left to the judgment of each practitioner to make any deduction from the following rates which the pecuniary circumstances of the patient may require.

For each visit, within the city, in the daytime	\$3.00
For a visit after 9 P.M. and before 8 A.M.	\$5.00 to \$10.00
(In cases of consultation or other extraordinary attendance in the night, the fee for such extra attendance shall be added to that for a night visit.)	
For a visit in consultation	\$5.00 to \$10.00
For attendance involving travel out of town, mileage shall be charged at a rate per mile, for short distances, of	\$1.00 to \$2.00
For advice at the physician's house, according to the importance of the case, unseasonableness of the hour, or time occupied	\$3.00 to \$20.00
For Vaccine Inoculation	\$5.00
For attendance in Midwifery in the daytime	\$20.00
For " " in the night	\$30.00

(Obstetric Operations, when necessary, shall be charged in addition to the usual fee for attendance. In obstetrical practice all subsequent visits shall be charged as in ordinary cases of attendance.)

For Minor Surgical Operations, such as stitching wounds, opening abscesses, etc. \$5.00 to \$25.00

For Major Operations, according to importance . . . \$25.00 to \$500.00

(After surgical operations, all subsequent visits shall be charged as in ordinary cases of attendance.)

A correspondent in this city says, *inter alia*, "Your article on 'Bills' is thoroughly just. The profession has little idea what injury it does itself by its careless and unbusiness-like way of managing the business part of its duties. Patients have an undoubted right to know exactly what services they are paying for, and they will pay much more cheerfully for knowing." He has sent us his own private printed fee-bill or tariff of charges, which are eminently satisfactory from a professional point of view. He states that he hands this to his patients at their first visit. We are glad to know that there is one physician in Philadelphia willing to state publicly that his charge is five dollars a visit.

THE MEDICAL SERVICE OF THE ARMY.

THE grievances, desires, and necessities of the army medical service have been so thoroughly and almost unendingly discussed that all of our readers are, no doubt, sufficiently posted upon the merits of the case. There is scarcely room for any difference of opinion on the matter, and we believe a singular unanimity prevails in the profession, from Key West to the extreme northwest corner of Oregon. What is wanted to effect the desired change is *personal effort* on the part of *individual* physicians. Passing resolutions in County Medical Societies is all very good, but we doubt if such action accomplishes much. Plain, straightforward, earnest appeals to members of Congress from their medical attendants or from other physicians of local eminence in their various congressional districts, if persistently and urgently made, would certainly have an overwhelming influence. Will our readers make such efforts?—approaching their respective representatives personally or by letter, with the set determination to carry their votes? Any one willing to work, and lacking the necessary information, can obtain, we believe, the requisite documents by writing to Dr. J. M. Toner, Washington, D.C.

DEATH FROM METHYLENE.

A DEATH from the inhalation of the bichloride of methylene, which recently occurred at the Royal London Ophthalmic Hospital, is reported in the London *Lancet* for December 19. The patient was a woman 25 years of age; the operation a trifling one. The anæsthetic was administered by an experienced, careful surgeon. Three drachms by measure were poured into the perforated leather inhaler, covered with flannel on the inside (the ordinary quantity for an adult being four drachms). At

the end of about two minutes after the inhaler had been placed over the mouth and nose of the patient, her breathing suddenly became loud and stertorous.

The anæsthetic was at once discontinued, and the operation commenced. When the inhaler was removed, the lips and cheeks were ruddy, but an unusual pallor of the alæ of the nose and skin around the mouth was noticed. The respiration, however, continued deep, full, and exaggerated. The inspirations were accompanied by loud palatal stertor, and the nostrils were observed to be flaccid, but there was no impediment to free access of air to the lungs. Some seconds afterwards, the pulse at the wrist rapidly failed, and then ceased almost suddenly, but the respiration continued for some time, and then failed rather suddenly. Every effort at resuscitation was made, without effect.

DR. MARY PUTNAM JACOBI, during a recent meeting of the New York Pathological Society, temporarily occupied the chair during the presentation of a specimen by the President. We are informed that she has been elected delegate to the New York State Society from one of the local societies, and that it is intended to send her as a delegate to the next meeting of the American Medical Association.

PROF. AGNEW has declined the position of Coroner's Physician, and deserves the thanks of the local profession therefor. It is a good and, in this community, a rather rare example for a man to refuse a lucrative position because his special knowledge does not fit him for it, or because his work must be done by proxy.

CORRESPONDENCE.

TOKIO, JAPAN, Nov. 23, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—You asked me when I left America to write you from time to time on medical subjects. I have been in Japan about one year, and am only now becoming familiar with its peculiarities. There is one disease found here which I have never seen described in any medical work or journal; it is called "Japanese leprosy." I have been so fortunate as to see four cases,—two very perfect ones. One, a man 40 years of age, married, a samourai, that is, a two-sworded retainer of a prince. He had suffered some six years; the symptoms gradually increasing until, when I saw him, he was covered with brownish mahogany-colored spots, not elevated above the surface, varying in size from an inch to four or five inches in diameter; these were distributed over the trunk and limbs. His face seemed

entirely covered with this discoloration, some parts a lighter and some parts a darker shade. His legs were œdematous, as also was his face. The most astonishing peculiarity of this eruption was an entire loss of sensibility in these spots, whilst outside of their circumference he had perfect sensibility. Another peculiarity was œdema of the eyelids, with inability to close them. On his attempting to do so, a space of a quarter of an inch separated them. Beneath and throughout the conjunctiva was a deposit of brownish mahogany-colored pigment. This accumulation was greatest at the inner canthus. Another symptom, and, as the native physicians tell me, an infallible one in point of diagnosis, was entire loss of the eyebrows; giving the man a most curious expression. The hair of this patient's scalp had not come out, but in some cases it does so. The patient complained of no trouble elsewhere; no itching of the skin; urine high-colored, specific gravity normal. The only fault he had to find with his disease was the peculiar appearance it gave him, and the people in the public baths not liking to bathe with him. It is not a contagious disease. The skin on his face had a shining appearance, an important point in diagnosis. In the spots on his limbs I thrust needles to the bone without detecting the slightest sensibility; this, too, is diagnostic. The disease is hereditary and considered incurable. I placed the man under treatment with cod-liver oil, iron, good food, beef, etc. He continued to improve slightly until an insurrection broke out in his province, Saga, when I lost sight of him.

The second case was very similar, with few exceptions. In this case the eyebrows had not been entirely lost, his hair was coming out, and he had partial paralysis of lower limbs, also an endocardial murmur. I suppose this second case was complicated with "beriberi." This case, too, I have lost sight of, owing to the Formosan trouble. He was placed under the same treatment, with digitalis added. I am sorry that I am unable to give you any further points on these cases, but hope soon in my hospital practice to study the disease fully. I would further state that case No. 1 said that the exciting cause in his case was hardship and unwholesome food during an insurrection, and that his father had died from the same disease.

Hoping this description will interest you,

I remain yours, very truly,

A. S. ASHMEAD, M.D.

NEW YORK CITY, January 1, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

AT the meeting of the County Medical Society held a few days since, Dr. Abraham Jacobi read a very elaborate paper on a subject which is, just at the present moment, occupying a large share of public and professional attention,—that of *diphtheria*.

He dwelt largely upon the nature of the disease, and treated minutely the histology of diphtheria. To the general practitioner, however, his paper is mainly important as regards treatment.

He said the remedies which he uses are few in number and simple in character. Many cases he had not attended, because he believed he had prevented them. He did not speak of those members of a family who, being exposed, have fallen sick, and who are protected by the isolation of the patient under the same roof; but he spoke particularly of the preventive apparatus in the hands of every family practitioner. He looks after the mouth and the pharynx of the children among his acquaintances as a regular thing. Eruptions on the head must be removed, and glandular swellings around the neck prevented or speedily cured. The same may be said of nasal catarrh and catarrh of the pharynx. Hypertrophied tonsils must not be excised at a time when diphtheria prevails, for at such a time every wound is apt to become diphtheritic, and hardly any operation inside the mouth will heal without becoming diphtheritic. For the same reason he postpones almost every sort of bloody operation during an epidemic of diphtheria, if possible. Lately he had seen the whole wound of an operation performed by one of the most prominent operators in the city, in a house where there was none of this disease before, become diphtheritic and jeopardize the success of the operation.

He spoke of the chlorate of potassium and the chloride of sodium as means of preventing the disease. He did not, however, place much reliance on these agents as remedies in diphtheria, yet he gave chlorate of potassium in almost every case. The chlorate is a remedy eminently fitted for most sorts of stomatitis. The large number of cases of stomatitis and pharyngitis during the prevalence of diphtheria and other kindred complications justifies and requires its use. He gives it for its effect on the inflamed mouth and pharynx, but not for the diphtheria. It acts as a preventive by restoring the mucous membrane to its normal condition. He does not do much more in tonsillar diphtheria. As this is a benign affection, it is of much greater importance to prevent it from spreading than to remove it from the tonsils, where its connection with the systems of the blood and lymphatics is so limited. In order to have the full effect, he insists upon frequent administration. Doses ought to follow each other in rapid succession: at least every hour, every half-hour, or every quarter of an hour a small dose ought to be given, to keep up a constant control over the endangered mucous membrane with the remedy. From a half-drachm to a drachm may be given during the twenty-four hours. As many families are acquainted with the remedy and use it without being bidden, see to it that the dose is not too large. The death of Dr. Fountain, of Davenport, Indiana, and of many others, from overdoses of chlorate of potassium, ought to be heeded.

In mild cases of tonsillar diphtheria Dr. Jacobi sometimes tries to remove or destroy the membrane when the latter is accessible. He insists upon the latter being the case, because, in his opinion, the use of solid sticks or of the mineral acids has done more harm than good. Where he cannot reach the diphtheritic deposit and remove it thoroughly, usually with the con-

centrated carbolic acid, he lets it alone altogether. The experience is not new that abrasion of the mucous membrane and injury to the epithelium will spread this process in a very short time. In many of the simpler cases of tonsillar diphtheria, he gives chlorate of potassium combined with lime-water or tinctura ferri chloridi, 3ss to ʒij a day, and generally mixed with a little glycerin, for the purpose of keeping the remedy in longer contact with the diseased surface, if not for its own effects.

There is scarcely any fever which requires attending to, and rarely swelling of the neighboring glands. When there is, cold water or ice applications may be used.

Every individual case must be treated on general principles. The fever ought to be reduced by washing, bathing, or by suitable remedies, increased debility obviated, collapse attended to, also reflex actions, such as vomiting, and the like, relieved. Whether ether, wine, brandy, champagne, camphor, musk, ammonia, coffee, etc., are to be selected, the individual case can teach better than any one else. All these remedies are frequently unsuccessful because used too late and in too small quantities. Whatever is to be done in diphtheria must be done early. More than anything else, the doctor urges attention to feeding. Remembering the greediness of lymph-vessels when the chyle-vessels are not supplied, he feeds as well as the digestive powers of the patient will permit, always keeping in view, however, the fact that the stomach of a fever-patient must be carefully looked after.

In regard to another class of diphtheria, everything depends on doing the right thing at the right time,—that is, the early time. He referred to nasal diphtheria. Most of these cases originate in the pharynx, and reach the nose by ascending to that locality. When a case of this kind is just established in the nose, it shows itself very soon by a peculiar thin discharge, not at all copious, and by a very early swelling of the glands of the neck. In both of these classes of cases, the local treatment has to be commenced at once; and in a large majority of cases the treatment will be successful.

What are the dangers of nasal diphtheria? Rapid absorption, putrefaction, inhalation of vile smells. The indications are clear enough. The surface of the nose must be cleansed and disinfected. When you begin early, the layers of epithelium are less liable to be involved in the diphtheritic lesions. Your disinfectant will then be successful, and your injection will wash the surface clean. No strong disinfectant is required: two or four grains of carbolic acid to the ounce of water is enough. Injections must be made into each nostril until the stream flows freely. This should be done every hour, or oftener if necessary. At the same time, care must be taken that none of the liquid reaches the fauces. Of otitis there is no fear. Probably the Eustachian tube is closed by catarrhal or diphtheritic swelling. He has never seen any difficulty arising from injections. A common syringe suffices; the nasal douche is much better. In neglected cases the syringe will open a closed-up nares. In such cases the tweezers

or pincers are sometimes necessary to remove the collected material. The child frequently has swelled glands—the head is thrown backwards or sidewise, or he suffers more from loss of sleep arising from obstructed nares than from the glands, and the injections give speedy and certain relief. Some children insist upon their being made.

Frequently the swelled glands have diminished in less than twenty-four hours after local treatment has been commenced. If there is an objection to this that discomfort is produced, the objection does not count. There is only one way to save a case of nasal diphtheria, and that is by disinfection and washing of the parts. What disinfectant is preferable? He avoided, in the first place, those which stain the surroundings, and those which coagulate. For that reason the various preparations of iron are not used, and also the permanganate of potassium. Carbolic acid has been frequently used by him. When there is no smell, lime-water has often been used, pure, or somewhat diluted, for its solvent effect. Internal disinfectants and antiseptics are of no effect. But, above all, attendance is necessary. He has not lost a single case in his own practice for years. He sees them early, or has them looked after, and takes care that his orders are strictly obeyed.

The panic in this city is entirely unjustifiable. It is the result, not the cause, of the newspaper discussions. With the exception of a few fatal cases, there is no disease that can be more easily or successfully managed than this, and its mortality ought to be small. A case of diphtheria, mild or severe, ought to be attended at once.

As a means of allaying the panic better than the disinfectant, he proposed that a physician should be appointed for each district of the city, to be well paid by the city, whose business should be advertised in the papers, in the schools and station-houses; and let it be understood that he will look after the throat of every pauper or tenement-house child with symptoms either of diphtheria or of pharyngitis. The result will be not only encouraging, but satisfactory. W.

[NOTE.—The writer of this communication has had occasion recently to witness in his own family the good effect of the line of treatment indicated above. Three children were affected with diphtheria,—a complication of pharyngeal and nasal. I have reason to think it is but just to say that the attending physician, Dr. E. C. Harwood, in his treatment acted upon his own original convictions. He used disinfectants, stimulants, thorough cleansing of the throat, the nasal syringe introduced posteriorly, and unremitting and constant personal attention; which remedies and means were applied early and frequently.

The result is favorable, though the patients have not entirely recovered. The youngest, a boy of about four years, exhibited nephritic, glandular, and paralytic complications. In two there is a slight difficulty of speech, and in the youngest there is not only considerable difficulty in speech, but also marked difficulty in walking. There is reason to expect a perfect recovery.—W.]

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The girl, M. K., who was under my care last winter at the Pennsylvania Hospital for wrist-drop brought on by the use of sugar of lead as a cosmetic, and whose case I reported, together with two other cases of poisoning from the same cause, in the number of the *Times* for January 17, 1874, has recently returned to the hospital with a slight recurrence of her paralysis. At the time of her readmission she was unable to extend the middle and ring fingers of the right hand,—the hand most affected during her previous attack,—but could execute all the other movements of the hand and wrist. The paralysis must, therefore, have been limited to one muscle, the extensor sublimis digitorum; the fact that the little and ring fingers have each an extensor muscle of their own fully explaining the persistence of the power of extension in them.

The galvanic current is applied daily to the paralyzed muscle, and the iodide of potassium given in moderate doses. Under this treatment the patient is rapidly regaining the full use of her hand. She denies having applied lead in any form to her face, but the existence of a well-marked blue line along her gums makes me somewhat doubtful of the truth of her assertion.

Very respectfully, yours,

JAMES H. HUTCHINSON, M.D.

2019 WALNUT STREET, December 22, 1874.

THE FLOORS OF HOSPITAL WARDS.

AT the recent meeting of the American Public Health Association, Dr. Woodworth, of the Marine Hospital Service, in reading an abstract of his late report "On Hospitals and Hospital Construction," remarked in reference to the floors of wards that "they should be of compact wood, the joints being filled with white lead, and paraffine oil or beeswax should be used on the surface." The subject excited some discussion, and Dr. Ray said "that oiled floors would not shed dirt; all that he had ever seen had been always dull and dirty." Dr. Woodworth replied that "he meant boiled linseed oil, which afforded a hard surface."

During recent visits of surgical observation which I made among the prominent hospitals of Europe, the character of the floors of the wards was the most attractive and commendable feature in a considerable number of instances. I gave some attention to the very perfect surface of these floors, and inquired into and often saw the process by which the beautiful hardness and polish are produced and maintained. The surfaces of these floors have a polish that looks almost vitreous, and they are so hard that no impression or even dulling of the gloss is made by continued walking over them. These beautifully polished floors prevail in some of the best hospitals in London and other cities of Great Britain. The most perfect of such floors I observed in the Royal Infirmary of Manchester, the polish being equal to that of fine cabinet furniture, reflecting light brilliantly, and the surface seemed so hard and well

preserved that not a scratch or other blemish was visible.

Such floors are easily cleaned, impenetrable to moisture, and can be kept in perfection with but little and unskilled labor. If there is a single objection to them, it is that they are so slippery that there is great liability to fall on them; and I recall the guarded manner in which I walked over them.

The advantages of these enamelled floors in a hygienic view are apparent, and the appearance of the wards is rendered very attractive by them.

This hard and polished surface is produced by the simple process of occasionally *rubbing* them with a mixture of ordinary *yellow wax and turpentine*. The proportions of the combination do not seem to be very important, but enough turpentine is added to melted wax to give the mixture a very viscid consistence when cold. The rubbing is performed with woollen cloths on which a small quantity of the mixture is spread. The cloth is wrapped around a block of wood that is furnished with a long handle, so that the operator stands erect whilst at work.

This light work of polishing almost supersedes the more laborious duty of scrubbing the floors, and it can be performed by ordinary attendants or may be a light exercise for convalescent patients.

I commend the process as worthy of general adoption in the hospitals of this country.

R. J. LEVIS.

REVIEWS AND BOOK NOTICES.

ORTHOPÆDIA, OR A PRACTICAL TREATISE ON THE ABERRATIONS OF THE HUMAN FORM. By JAMES KNIGHT, M.D., Member of the Medico-Chirurgical Faculty of Maryland, etc.; Physician and Surgeon-in-Charge of the Hospital of the New York Society for the Relief of the Ruptured and Crippled, New York City, etc., etc. New York, G. P. Putnam's Sons, Twenty-third Street and Fourth Avenue, 1874.

The increased interest which has been awakened in the professional mind during the past few years in that branch of our art which relates to the relief of deformities is evidenced in two ways: first, by the establishment of special hospitals for the reception of patients thus afflicted; and secondly, by the frequent appearance of monographs and treatises on the subject. The last ten years have probably witnessed greater additions to the literature of this department of medical science than a period of three times that duration preceding. The work before us illustrates both facts, as it is the offspring of the first institution of the kind in this country, so far as we know. Fully eleven years ago we remember visiting Dr. Knight in his little domestic hospital on Second Avenue, the modest progenitor of the noble and unique building now set apart by New York munificence for the care and cure of these unfortunates, and being greatly struck with the fact developed by the cases which he was kind enough to show us, that mere position is a most important factor in the restoration of paralyzed muscles to the performance of their functions, a truth which has stood us in good stead ever since. The value of the doctor's book consists in the fact that it gives the resultant of the observation of a very large number of cases requiring mechanical treatment, under the favorable conditions of

dispensary and hospital practice, during a comparatively short period, he "having had the supervision," as he tells us in the introduction, "of 26 448 patients within the past ten years." His work seems to have been honestly and conscientiously performed, and its results have been such as to enable him to record that "seventy-five per cent. of the ordinary conditioned patients laboring under synovitic disease have been restored to self-sustaining ability, the disease having been arrested and the limbs restored to usefulness;" a sufficiently satisfactory showing. There is little that is new or startling in his conclusions. He abstains with praiseworthy modesty from the attempt to introduce any wonderful invention of his own, relying, as every practitioner will as his experience in mechanical therapeutics increases, on the modifications which the requirements of each case call for. He particularly warns the beginner against substituting the services of the instrument-maker and a fashionable apparatus for a careful personal study of the individual problems presented to him. His tendency is decidedly to conservatism and expectancy. The roller-bandage, elastic compression, careful attention to position, and strict hygiene, find much more favor in his eyes than exsection, resection, gouging, and chiselling; and we are inclined to think that his figures support his views. His appliances are extremely simple, often old-fashioned; Scarpa's shoe, with very slight modification, answering all the indications in both varus and valgus, the original steel spring being preferred to india-rubber cords. In spinal caries he proposes nothing better than the old crutch support, resting on the hips. His hip splint has no other means of extension than the perineal strap. His practice in the two latter classes of diseases, viz., *exercise* in the open air, with *use* of the affected joint, protected from shock by mechanical support (as far as he accomplishes it), is decidedly in advance of his pathology, *struma*. The importance of tenotomy in talipes and the paralytic distortions, as a preliminary to further mechanical treatment, is strongly urged, and the directions for the performance of the operation on the different tendons are careful, explicit, and judicious.

As a literary effort the work does not commend itself to us. With a certain attempt at system, there is much confusion in the general arrangement. There is a constant attempt to bolster up faulty rhetoric, and even bad grammar, by bombastic phraseology. For instance (p. 10), "1. That of an arrestation of development, emanating from the nervous centres; or, as some believe the blood-vessels to precede the nerves, by their impairment affecting the peripheral appendages of the primary nucleus, and determining the normal or abnormal development of the foetus." *Arrestation* "is good." Again: "4. That unfavorable positions of the foetus *in utero*, influenced by the spherical boundary of the latter, is a primary cause of distortion, more especially of the extremities." On page 283 he recommends a "mucilage" made of "bread having been baked forty-eight hours;" and says of milk-punch that "experience has rendered it objectionable in some cases."

Nor is he happier in his use of foreign tongues or dead languages. Witness page 41, "In the foot of the bear, the malleola are," etc. Page 282, "a proper régime." Page 9, "enciente." Page 198, "treatment of genu extrorsium." The chapter on electricity is a crude rehash, apparently introduced as a puff to the "Galvano-Faradic Manufacturing Company." The cuts which this company has furnished are the best in the volume, the illustrations generally being faulty in design and rough in execution. The book, as a whole, while containing many valuable practical hints, will not help to elevate the standard of American medical literature.

B. L.

A SKETCH OF THE EARLY HISTORY OF PRACTICAL ANATOMY. By WILLIAM W. KEEN, M.D. Philadelphia, J. B. Lippincott & Co., 1874. Pp. 43.

This brochure, the subject of a lecture delivered before the class of 1874-5 in the Philadelphia School of Anatomy, is a republication of the same matter presented to the author's class of pupils of the class of 1870. The edition published by the latter was soon exhausted, and those who had applied too late for copies will now be glad to hear of its reappearance in a neater and more permanent shape.

As a rule, we hold essays on the history of medicine to be uncommonly stupid affairs, lifeless and limp, and savoring of the encyclopædia. The reader will find this essay, on the other hand, a very entertaining account of the history of that branch of anatomical science to which the author has so successfully devoted his energies.

We would suggest as a theme in the same line of research the History of the Philadelphia School of Anatomy, and hope Dr. Keen will place on record the varying fortunes of this famous school, which has educated hundreds of this and the preceding generation of physicians, and developed the powers of many of our most brilliant lecturers. The present time would be an opportune one to present the profession with such a chronicle, and it is especially fitting that Dr. Keen should undertake the task before the buildings are demolished to make way for the new post-office.

STUDIES IN THE FACIAL REGION. By HARRISON ALLEN, M.D. 56 Wood-cuts. 8vo, pp. 117. J. B. Lippincott & Co., 1875. For sale by S. S. White, Twelfth and Chestnut Streets.

The author states in his preface that these are mostly jottings from his lectures as Professor of Anatomy in the Philadelphia Dental College. The subject is treated topographically, in ten divisions, beginning with the Region of Expression. As a whole, the book at once arrests our attention by its judicious blending of philosophical and descriptive anatomy with their practical applications in explaining the phenomena of disease. Nor must it be presumed that the book is intended solely for dentists. While everything of interest to them is retained, there is not a page which is not of the greatest value to the practical physician or surgeon. The artist will find in the chapter on expression much that is valuable, and the comparative anatomist will receive with the greatest pleasure the contribution to the study of the development and the nomenclature of the teeth in the last few pages,—a chapter as valuable as it is novel. In the section on the localization of diseased action we recognize the same principles as in the author's previous valuable paper in the *American Journal* in 1870. A remarkable illustration of this we saw during the war, in which, from excessive salivation, the whole of the right superior maxilla, with the *premaxilla*, necrosed and exfoliated. The case is described (but not accurately) and the bone figured on p. 53 of the Army Museum Catalogue. Rarely do we meet with so good a little book as this, and we hope it may have a hearty reception from the profession.

W. K.

THE MEDICAL USE OF ALCOHOL AND STIMULANTS FOR WOMEN. By JAMES EDMUNDS, M.D. New York, National Temperance Society and Publication House.

This little brochure consists of reports of various addresses delivered in this country by Dr. Edmunds, member of the Royal College of Physicians, London. It contains little or nothing that is at once novel and true, but much that is novel and false. Thus, on page 51 we are told "that the babies of the present generation are never sober from the earliest period of their

existence until they have been weaned." We are assured that this assertion "is a simple fact." All we have to say in comment is that as the human conscience may be annihilated by repeated crime, so does it seem to us the human intellect may lose the divine power of distinguishing truth from falsehood by being employed upon the work of a partisan temperance lecturer. We sincerely hope Dr. Edmunds's book may have some influence in arresting intemperance, but certainly cannot think our readers will ever want to peruse more than one page of it.

THE DISEASES OF THE STOMACH. By WILSON FOX, M.D. H. C. Lea, Philadelphia, 1875.

This is a reprint of the third English edition of the *Diagnosis and Treatment of the Varieties of Dyspepsia*, a not absolutely fresh work, since the author's preface is dated October, 1872. This "third edition" was really in a considerable degree a new book, since, besides minor contributions, articles on ulcer and cancer of the stomach were added. These chapters, while containing nothing that is new, are well-written résumés of our knowledge upon the diseases of which they severally treat, and contain an elaborate bibliography of the subject. Dr. Fox seems to be ignorant of the great value of turpentine in some cases of chronic ulcer not attended by hemorrhage, and we think underestimates the value of nitrate of silver.

GLEANINGS FROM OUR EXCHANGES.

KOUMISS (*The Peninsular Journal*, December, 1874).—Mr. E. C. Saunders quotes Dr. Jagielski, of Berlin, as asserting that the action of the several constituents of koumiss may shortly be specified as follows:

The *lactic acid* excites the digestive powers, diminishes the temperature and the frequency of the pulse, and regulates the mucous secretion. It has an additional specific action in certain cases, as, for instance, in diabetes.

The *casein, albumen*, and *fat* restore the plastic and heat-giving materials of the body, and promote assimilation of its associate constituents.

The *lactose* increases the weight of the body and gives heat.

The *alcohol* produces sleep, diminishes heat, and forms fat.

The *carbonic acid* allays nausea, calms gastric irritation, augments diuresis, increases the energy of the heart's impulse, and diminishes the frequency of the heart's contractions.

CUTANEOUS ERUPTIONS SYMPTOMATIC OF RHEUMATISM AND GOUT (*The Boston Medical and Surgical Journal*, December 3, 1874).—Dr. James C. White quotes Professor Profeta, of Palermo, who describes as follows a peculiar set of cutaneous lesions which are produced by and are diagnostic of the rheumatic diathesis:

1. The arthritides are seated sometimes upon parts of the body which are exposed, sometimes upon those which are rich in sweat-glands and hair-follicles, sometimes upon the skin which covers the joints. They are always circumscribed, and if by chance they spread, they never become general.

2. They never appear all at once, but are always developed by successive outbreaks.

3. They are asymmetrical, inasmuch as they never affect two corresponding regions, and, when occurring upon both sides of the body, their abundance and distribution are not the same.

4. The eruption appears in groups, which do not extend, and which never occupy any considerable surfaces.

5. The affected skin is generally of the color of red wine or a raspberry, and small hemorrhagic spots are often seen in the midst of the eruptions.

6. The efflorescences are polymorphic.

7. They are essentially dry, exhibiting no tendency to suppuration or to serous exudation.

8. The sensation connected with them is not decidedly pruriginous; it is more prickling or burning.

9. The first outbreak lasts quite a long time; but as they are repeated they disappear more rapidly, and at last have only an ephemeral duration.

10. The arthritides almost always relapse.

RUPTURE OF THE UTERUS—NEW SYMPTOM (*Virginia Medical Monthly*, December, 1874).—Dr. Robert J. Preston reports the case of a multipara, æt. 26, who was troubled during her third labor with severe flying pains in the back. At the second examination which was made, a small tumor, of a cushion-like, soft feel, was discovered just below the utero-vaginal junction, occupying the right latero-posterior aspect of the vagina. Some suspicion of pelvic hæmatocele was felt at the time; but, the swelling being insufficient to interfere with the progress of labor, the pelvis large and capacious, and the previous labors having been short and easy, no special attention was given to it.

Four hours later, this swelling had disappeared, but, as the pains were infrequent and feeble and the head was advancing very slowly, ergot was administered. A few hours later the patient gave a sudden cry, and was found to have all the most alarming symptoms of shock, and it was then recognized that the uterus was ruptured. She died in a short time. In cases where the rupture is a small one, and contractions do not immediately cease, the diagnosis becomes very difficult. It is in these cases, which, unusual as they may seem, are nevertheless of pretty frequent occurrence, that this new symptom—this sub-peritoneal tumor appearing in the hypogastric region, in the groin, or in the vagina—becomes unquestionably one of great value, as indicative of this initiatory lesion or perforation, and as premonitory of an impending crisis more terrible; but which may be averted by the immediate and timely extraction of the child and its appendages. In the case above reported, the swelling in the vagina, discovered some eight hours before the fatal issue, was undoubtedly a tumor of the character described,—a sub-peritoneal effusion from slight rupture or perforation of the uterine tissue; and had its significance been appreciated at that time, and the immediate extraction of the fetus and its appendages been procured, the final issue might probably have been different. It is useless to say that, under the circumstances described, no ergot, even tentatively, should have been given.

SCALD OF THE GLOTTIS (*The Dublin Journal of Medical Science*, October, 1874).—Dr. Corley reports the case of a child, two years and ten months old, who tried to drink out of a kettle containing boiling water, and seemed scalded at the time, but soon recovered, and went to sleep quietly. About three hours afterwards he awoke with great difficulty of respiration, and was taken to a hospital. Here he was at once placed in a room where an equable and moist temperature was maintained. The dyspnoea occurred in spasms, which grew more and more frequent, and during their continuance there was great cyanosis. A grain of calomel with one-sixteenth of a grain of tartar-emetic was exhibited every hour, and half a drachm of strong mercurial ointment was rubbed into the groins and axillæ at the same intervals. Six leeches were applied, and hot sponges were kept constantly on the throat. No

important change took place for about six hours, except a gradual diminution in the frequency of the pulse, which necessitated the withdrawal of the tartar-emetic and the administration of the calomel at shorter intervals. The respiration grew more rapid, crepitating râles could be heard down to the bases of both lungs posteriorly, whilst percussion over the same parts elicited marked dulness. The case was judged to be too far gone for operation, and the child's mother was informed that there was no hope. Just four hours later, green stools appeared, and coincidentally slight symptoms of improvement became manifest. The case resulted in entire recovery. The active treatment, which extended over seventeen hours, may be thus summed up: Twenty-four grains of calomel, six drachms of mercurial ointment, three-fourths of a grain of tartar-emetic, and the application of six leeches.

INHALATION IN A CASE OF CASTS OF THE BRONCHIAL TUBES (*The Lancet*, November 7, 1874).—Dr. Edwin Payne reports the case of a youth of sixteen, who was much troubled by coughing up frequently, indeed almost daily, a firm white material, sometimes in considerable quantities. This, upon examination, presented the appearance of regularly-formed casts of the bronchial ramifications, from bronchi of the third and fourth order, consisting of tree-like, repeatedly forked coagula of a white color. Upon examining the chest the sounds were healthy, with the exception of some sibilant rhonchus at the infrascapular region of the left side. He had brought up these casts during a period of two years. The only history of previous illness was that as a child he had had diphtheria.

For the space of two months he was under treatment, and used an inhalation of creasote and tincture of iodine, five minims to ten minims of each in a pint of steaming water twice or three times a day; at the same time he took some dilute nitric acid and bark twice a day. The progress of the case was, that the casts gradually diminished, and concurrently the amount of the sibilant rhonchus diminished also, until at the end of the two months he was free from his trouble, and upon reporting on two or three occasions, the last of which was after the lapse of three months, he had had no return.

FATAL HEMORRHAGE FROM A UTERINE SINUS (*The Lancet*, Nov. 28, 1874).—M. Depaul, the eminent obstetrician of Paris, lately mentioned a peculiar case before the Surgical Society. In 1869 he had attended a woman in labor affected with the rickets, and had been obliged to break up the head. Quite lately she again fell in the family way, and M. Depaul determined to excite premature labor. The antero-posterior diameter was three inches and a half. Tarnier's tube was introduced into the uterus, and gave rise to some pains, but the tube slipped out twenty-four hours afterwards. The author was getting ready with the prepared sponge, when the patient was seized with violent pain in the upper part of the abdomen on getting out of bed. She grew very pale, and died in a few hours. The Cæsarian operation was performed, but the fetus was dead. A perforation was found at the posterior and superior portion of the uterus, and around the hole were noticed large subperitoneal sinuses. The opening corresponded with the placenta, which, on being detected, was found to be more adherent than usual. In 1869 the placenta had been removed by the hand of the accoucheur passed into the uterus. The uterine walls were very thin around the perforation, and had undergone fatty degeneration. No blood was found in the womb, but three pounds of it were taken from the abdominal cavity. A sinus was observed, which looked worn out and severed just by the perforation. Through this the blood had escaped, and the continual loss had killed her in three hours.

MISCELLANY.

NEW PROCEDURE IN SKIN-GRAFTING.—In order to avoid the difficulty of borrowing numerous grafts from the individual on whom they are to be applied, Dr. B. Anger, a Parisian surgeon, has had the idea of taking them from amputated limbs. He has been quite successful with grafts of all kinds,—epidermic, dermo-epidermic, including the whole skin, and taken from the mucous membrane of the foreskin. In all the cases the graft was made whilst the temperature of the amputated parts was still high. In two cases the patients had been placed near each other, so as not to lose any time in grafting.—*London Lancet*.

THE death of Mr. John B. Foster, assistant to Sir Henry Thompson, recently occurred in London. It was caused by an explosion of gas which took place as he was lighting a large chandelier.

A MODEST EDITOR.—“We claim, as the special excellence of *The Clinic*, that it contains more *readable* matter than any paper published in this country.”—*The Clinic*. The *Philadelphia Medical Times* publishes about twice as much matter yearly as the *Clinic*: of the quality we leave the public to judge.

PROFESSOR AUSTIN FLINT, JR., has been appointed Surgeon-General of the State of New York, on the Staff of Governor Tilden, newly elected.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

MESSRS. EDITORS,—Prof. Erichsen may well be pardoned for asserting that he knows of “no special hospitals in any of the great American cities,” when our own people appear deficient in such knowledge, or, if aware of their existence, choose to ignore them. The “Howard Hospital and Infirmary for Incurables” is such an institution, and I believe the only one in Philadelphia which makes *specialties* its sole prominent feature. It has been in “active and very flourishing” existence for over twenty years, having been chartered by the Legislature in May, 1853.

Its efficiency and very satisfactory results to both physician and patient, the annual reports of its Board of Managers abundantly prove. It has a staff of ten physicians and surgeons, besides two resident or, as the phrase is, *interne* physicians, and employs a matron and steward. The specialties are classified in the following order: diseases of the digestive organs, diseases of the chest and throat, diseases of females, obstetrics, diseases of the brain and nervous system, fevers, vesico-renal affections, diseases of the eye and ear, diseases of the skin, surgery. We have thus nine divisions, to each one of which a physician exclusively devotes himself, except in the department of surgery, which comprises two.

The institution is controlled by a Board of Managers, consisting of twenty-four gentlemen, among the most enlightened and benevolent of the citizens of Philadelphia. Quiet and unpretentious, but thorough in its direction and appointments, it has afforded relief to thousands of the worthy poor and suffering in our midst, and has yielded, to the physicians whose time and talents have been devoted to its laudable success, a vast and rich fund of information and experience, with the consciousness of well-directed professional and philanthropic aims. T.

SHADY-SIDE, MONTGOMERY CO., Dec. 30, 1874.

KANSAS CITY, MO., Dec. 19, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

On the night of the 11th of this month, the Professor of Surgery (Dr. Taylor) in the College of Physicians and Surgeons of this place rushed into

my room and asked me if I would not attend Mrs. A., just about to be confined, and remarked, “She has sent for me to come.” So, in compliance with the Professor’s wish, I at once started. On my arrival, I found a large German woman, apparently in active labor. I immediately made an examination; waited a few minutes for a pain, but no pain came. On placing my hand upon the abdomen, I was surprised to find very little tumefaction. On questioning the woman, I found she had been married twice, had borne two children by her first husband; none by her second; and had been married to him only twelve months. She also remarked, “I have never missed a month.” “Then why do you think you are pregnant?” “Because I am eight inches larger around the waist than when I married, and I am so large I have been ashamed to be seen on the street for a month past, and often I have felt the movement of the child.” Not believing her to be pregnant (notwithstanding the baby-clothes, etc., she had lying around the room), I gave her one-fourth grain of morphia, and left. The next day Professor Taylor and myself examined the woman thoroughly, and found the os normal; but in passing the sound the interior of the womb was quite sensitive, and a slight discharge of blood followed the withdrawal, but no child, no ovarian trouble, no fibroid, no polypus, and, in short, nothing that would point to any abnormal trouble whatever. It seems that since the woman’s last marriage she has gained some thirty-five or forty pounds of flesh, and, her abdominal muscles being very much relaxed, the whole viscera has gravitated towards the pelvis, giving much the appearance of a pregnant woman. The extra pain experienced at the time was occasioned by the menstrual discharge, which was just appearing.

E. R. LEWIS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Will you oblige me by inserting the following letter in your journal? W. S. KING.

“PHILADELPHIA, Dec. 29, 1874.

“DR. W. S. KING, U.S.A.:

“DEAR SIR,—Accompanying this you will find samples of some preparations which have been originated and made by me. Among others I would call your attention to solutions of morphia and veratria in chloral and glycerin, on account of their adaptation to the requirements of the physician as topical applications in neuralgia and rheumatism, believing that such compounds would afford relief on account of their solubility and diffusiveness. For a full description of the method employed by me for making them and other combinations of the alkaloids with chloral as a solvent, allow me to refer you to the article written by me and published in the December number of the *Journal of Pharmacy*, 1874.

“During the prevalence of smallpox in 1871 and 1872, I had frequently been requested by my friends to prepare a cologne possessing disinfecting properties. I found in preparing such an article that upon mixing hydrate of chloral and carbolic acid the disagreeable smell of the latter was almost entirely removed, and upon adding these to spirits of lavender or ordinary cologne-water a not unpleasant odorous volatile solution resulted. This, used with an atomizer, readily saturated an ordinary-sized apartment with the vapor of these most valuable antiseptics. The idea of using chloral as a disinfectant I believe occurred to me in consequence of the fact that during those years on several occasions you spoke to me of having found that that substance was a most powerful antiseptic, stating that you had used it as such with the most satisfactory results in the preservation of anatomical specimens.

“I think, then, that you will perhaps look favorably upon this peculiar disinfectant, a vial of which you will find in the package. Hoping that I am not trespassing too much upon your time, and that your health has improved,

“I am yours respectfully,

“ROBERT F. FAIRTHORNE.”

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 5, 1875, TO JANUARY 11, 1875, INCLUSIVE.

KINSMAN, J. H., ASSISTANT-SURGEON.—Assigned to duty at Fort Abraham Lincoln, Dakota Territory. S. O. 284, Department of Dakota, December 30, 1874.

ROSE, GEORGE S., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Loring, to comply with War Department Orders No. 233, c.s. S. O. 111, Department of Arizona, December 21, 1874.

LORING, L. Y., ASSISTANT-SURGEON.—Assigned to duty at Fort Yuma, California. S. O. 111, c. s., Department of Arizona.

WIGGIN, A. W., ASSISTANT-SURGEON.—Relieved from duty in the Department of the Columbia, to report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, by letter to the Surgeon-General. S. O. 3, A. G. O., January 6, 1875.

SATURDAY, JANUARY 23, 1875.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE INDUCTION OF PREMATURE LABOR.

(Abstract of a Clinical Lecture delivered at the Allgemeines Krankenhaus, Vienna.)

BY PROF. CARL BRAUN.

Reported by G. WILDS LINN, M.D.

GENTLEMEN,—I propose calling your attention to-day to the various methods made use of in the operation for the induction of premature labor. The manner of performing an operation so often required at the hands of the obstetrician, and upon which is dependent so much of good or of evil to mother and child, is, as you may suppose, of the greatest importance. It has taxed the ingenuity of the accoucheur for a century, and there yet remains in the mind of the profession much doubt and speculation upon the subject. There are those, it is true, who, by a complication of modern contrivances, claim to achieve brilliant successes, and to make this one of the easiest operations we have to perform. I hold in highest estimation the man of practical mind who makes use of few measures and those the most simple, while, on the contrary, the man with theoretical ideas and a multiplication of means is least to be trusted.

Without risk of incurring the charge of egotism, I think I can say I have had as many opportunities of ascertaining the relative values of the various methods used as any other man living,—certainly as many as any man in Germany; and therefore when I speak upon this subject I assume the right of speaking with some authority.

In considering the methods employed, or any particular method, it is first absolutely necessary that we bear in mind the character of the organ with which we have to do. Suffice it to say that the pregnant uterus and the non-pregnant uterus are two very different organs, and the treatment of these must be correspondingly different. He who thinks otherwise has had but little experience, and errs very much. The uterus of the pregnant woman is an exceedingly sensitive organ, and in all our operations upon it the fewer manipulations we make consistent with the necessities of the case the better.

The old method which was employed when the induction of premature labor was first sanctioned by the profession was the simple opening of the amniotic sac. This plan was for a long period practised, and with very good results. In time, however, it was affirmed that this early draining away of the amniotic fluid was inconsistent with the gradual dilatation of the cervix, and hence, with the normal progress of labor. Then it was suggested to open the sac higher up at a distance from the os; and this method is still used by some who claim to have thereby good results. In reality this makes no dif-

ference in the progress of the case, as the rent made will proceed to the cervix so soon as labor-pains are developed.

The old writers, who entertained different ideas from those we hold concerning the length of the cervix in the latter months of gestation, deviated in time from the original simple plan. The first change made was in the introduction of the trocar with stilette. The danger in using this is at once apparent when we remember that very frequently the cervix lies horizontally in the vagina, so that the point of the instrument, if not carefully introduced, will pass through the posterior wall of the cervix. If force be used, it may not only pass through the wall, but, entering the peritoneal cavity, be made to enter the posterior wall of the uterus, and give exit to the amniotic fluid through the false passage so formed. In such a case, which is far from being impossible, the physician is not at the time aware of the injury he has done, and probably will not be until the death of his patient from parametritis or peritonitis reveals it in a post-mortem examination.

The mechanical dilatation of the cervix by the various speculæ devised for that purpose as a means of provoking labor are entirely disapproved of by me. Some of these speculæ I here show you. These all bear an antediluvian appearance. Some such instruments have been found among the ruins of Pompeii, and, though strongly advocated by some such men as Busch and Krause, are found deficient on trial.

The use of sponge tents has become very popular in late years in this operation. Simpson, who designed the tent, devised it for the non-pregnant and not for the pregnant uterus. That its use here is often productive of most serious if not fatal results cannot be questioned. It is often productive of parametritis, and pyæmic symptoms arising from the absorption of the foul discharges to which it gives rise are of no infrequent occurrence. That it is uncertain as to time is also true. I have in many cases used it for days before I have succeeded in provoking active labor-pains. Laminaria tents have not been found more efficient than sponge tents, and, like them, will produce dangerous complications. Any foreign body which must so long remain in the cervix is dangerous.

The use of the catheter or flexible bougie I will not allow in my wards under any consideration. Its use has been highly lauded by some, and yet I am sure that here, as is too often the case, the favorable cases are reported, while those that are fatal are never heard from. Like the tent, it is also uncertain as regards time, and I have often used it for many days before delivery was accomplished. It cannot be employed with my sanction, and he who uses it does so on his own responsibility.

The use of injections into the uterine cavity, according to the method of Cohen of Hamburg, is dangerous. Many patients die from such treatment. Injections of water, either simple or medicated, should not be allowed under any circumstances, and would not be allowed by any one who understands the inextensible character of the uterine tissues.

The use of cold water under such circumstances is barbarous in the extreme, always giving rise to the most intense pain. I entirely discountenance the use of intra-uterine injections, and hope that no student of mine will ever permit himself to make use of them to induce labor.

Vaginal injection, or the douche, according to the method of Kiwisch, is also most dangerous, and he who thinks differently has had but little experience. It does not act surely or quickly, and an inflammatory process very often results. Death, too, is not an infrequent occurrence from its use. I do not wish to entertain an unfounded prejudice, nor would I express myself so positively if I had not good reasons for doing so. A man, too, should be especially careful in opposing a method which is so popular. The manner in which the douche is applied makes but little difference. Great pain often follows its use,—a fact abundantly established by the histories of cases we have had in this hospital. I am not alone, however, in entertaining this opinion, for very many others who have tested this method coincide with me in this opinion. The danger in the use of the douche has not been found very great where the neck of the uterus is conical, the os being small; but where we have reversed conditions—a large cervix with the os somewhat dilated—the danger is proportionately increased. Hence the very probable presumption that the difficulty is produced by the entrance of the fluid into the uterine cavity. In this way also air may find a passage into the uterus, and death result from its transmission to the heart through the venous system. That fluid may pass through the Fallopian tubes into the peritoneal cavity is very possible; but I cannot so readily believe that the danger to be apprehended from this is great.

The tampon used by some is not to be recommended. It finds a much more proper place in placenta prævia, for it can be there used to much better advantage than in the induction of labor. Its action in the latter case is very slow and uncertain.

For many years elastic bladders dilated by air were used by the French, and more recently they have been extensively employed in England for the dilatation of the cervix; but they have failed to give satisfaction.

The injection of carbonic acid after the method of Scanzoni must be placed upon the same plane with the injection of water. Patients will die from its use, with the same symptoms and having the same post-mortem appearances as if they had suffered from the inhalation of the gas.

Suction of the mammæ for the purpose of inducing labor is entirely untrustworthy as generally practised. If persevered in until the desired result were effected, mastitis would certainly be a consequence.

Faradization as signally fails as suction of the mammæ, and cannot be relied upon. For many years I have had abundant opportunities to practise all these different methods, and now have an idea of what is right. Under no circumstances whatever will I allow myself further to experiment. The plan which I here pursue I have found upon a

long and faithful trial to give better results than any other. This is nothing more than the practice of the original method, consisting in the employment of a pointed quill, or, what will answer the same purpose, a steel pen. This method, besides having the advantage of simplicity, is always applicable, as the instrument is ever at hand. The point of the quill is placed upon the palmar surface of the index-finger, which is then passed up to or through the cervix, and the membrane punctured. An improvement on this plan consists in making an opening in the side of the quill through which a sound can be introduced. The point of the quill is then brought into close apposition with the body of the sound. The latter is then passed through the cervix, the quill being kept in position, and when the desired distance is reached the sound is withdrawn, leaving the quill behind, and the puncture can be made. In this manner we overcome the difficulty of passing the projecting angle of the posterior wall of the cervix.

By this method no damage can result, and a long narrow cervix can be readily passed. As the amniotic fluid drains away, pains are induced, the head passes down, and in twelve hours delivery can generally be accomplished.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON FLUORESCENCE,

CHIEFLY WITH REFERENCE TO THE ALKALOIDS OF CINCHONA.

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THE spectrum of a solar or other similar beam of light consists, first, of visible rays, embracing the primary colors of Newton; second, of ultra-violet, invisible rays, discovered by Ritter; and, third, ultra-red, invisible rays, discovered by Sir William Herschel. Each division and each color represents a certain degree of refrangibility. Fluorescence is a term applied to the lowering of this refrangibility, and the resulting luminous phenomenon. The fluorescent effect may begin in any portion of the spectrum, but the change is always downward; the length of the light-wave is increased, and its velocity of undulation diminished. In calorescence, which is sometimes spoken of as negative fluorescence, refrangibility is raised; but of this subject, which has been investigated by Akin, Tyndall, Bohn, and others, I do not propose in the present article especially to treat.

Each spectral division and color also means so many vibrations: four hundred and fifty-one millions of millions of oscillations per second, for example, produce the impression of red; seven hundred and eighty-nine millions of millions, that of violet; while above the violet the vibrations are even greater than this number. Fluorescent substances *slow* these vibrations. When waves of the luminiferous ether, visual or non-visual, strike the molecules of such a substance, they cause vibrations

among these molecules, but the vibrations are of *slower period* than those of the exciting waves. While some bodies transmit incident light, and others absorb it, fluorescent substances convert it into light of another kind. Slowing of vibrations, and lowering of refrangibility, are, in effect, the same phenomenon.

I will here cite only a single instance of fluorescence. A solution of sulphate of quinia is colorless when viewed by transmitted light; but when placed in a glass, and looked at from certain angles, it presents a beautiful celestial-blue color, which is due to fluorescence. The rays which produce this blueness are not the ordinary blue rays, but they are the ultra-violet or Ritteric rays, which have been rendered visible by the intermediation of the solution of quinine.

Sir John Herschel (Phil. Trans., 1845) first called attention to this phenomenon, which he attributed to *epipolic* or *superficial dispersion* of the incident light. Sir David Brewster (Edin. Trans., vol. xvi., and Phil. Mag., June, 1848) examined a large number of substances for the same property, using a lens to condense the beams of the sun. He considered the peculiar appearance to be due to *internal dispersion*. The name of Prof. G. G. Stokes is, however, pre-eminent in the history of fluorescence (Phil. Trans., 1852, 1853, 1862). His great discovery, published in 1852, was that the phenomenon hitherto ascribed to epipolic or to internal dispersion was in reality due to a change of the refrangibility of light. In 1853 he described a method of observation by the use of absorbing media, and in 1863 he made public some researches on the long spectrum of the electric light.

W. A. Miller (Phil. Trans., 1862) has investigated many of the elongated spectra obtained when secondary sparks from an induction coil are passed between metals.

Dr. Henry Bence Jones (Proc. of Royal Soc., April, 1866, and Lectures upon the Application of Chemistry and Mechanics to Pathology and Therapeutics, London, 1867) has published some researches of great interest, "On the Existence in the Textures of Animals of a Fluorescent Substance closely resembling Quinine," which supposed substance he called "Animal Quinoidine." Drs. Jones and Dupré had previously determined the rate of passage of lithia, and other mineral matters, into and out of the body (Proc. of Royal Soc., February, 1865). Before the investigations of Jones and Dupré, a few researches into the fluorescence of the media of the eye had been made by Brücke, Helmholtz, Regnaud, Setchenow, and Donders.

From Prof. H. C. Wood's "Treatise on Therapeutics," p. 68, I learn that Dr. Chalvet (*Schmidt's Jahrbücher*, Bd. cxli. p. 152, from *Gazette Hebdomadaire*, 2d series, t. v., 1868) has found that this fluorescent body, investigated by Dr. Jones, exists in various foods, and even in wine, and is therefore probably not of animal but of vegetable origin.*

* In passing, I may take occasion to note an important mistake in regard to the subject of fluorescence made on the same page of Wood's "Therapeutics" as that from which I have just quoted. Dr. Wood says,

Drs. Rhoads and Pepper (Penna. Hosp. Rep., 1868) have published a brief but interesting contribution on the Fluorescence of the Tissues. The blood of malarial patients, tested by them, yielded a fluorescence considerably less than its normal degree, which, after the administration of the sulphate of cinchonia, was found to be notably increased. In two cases, which died while under observation, the fluorescence of the spleen and liver was determined to be much above the healthy standard.†

From first to last in the history of fluorescence, the sulphate of quinia has been one of the chief subjects both of theory and of experiment. Herschel's experiments were mostly made with a quiferous solution. He examined a specimen of very pure cinchonine, but could not discover that it possessed in the smallest appreciable degree the property of epipolic dispersion, or fluorescence. Imperfect methods of observation will probably account for this result. Solution of the sulphate of quinia was also one of the principal fluids employed by Brewster, and Stokes has devoted large space to the consideration of the same substance, and other salts of quinia. With a spark from a Ruhmkorff coil, Bence Jones found that sulphate of quinia gave slight fluorescence with $\frac{1}{800000}$ of a grain; feeble fluorescence with $\frac{1}{380000}$ of a grain; and distinct fluorescence with $\frac{1}{250000}$ of a grain. The alkaloids of cinchona, other than quinia, have received but little attention from investigators.

Drs. Rhoads and Pepper used the sulphate of cinchonia instead of the sulphate of quinia in their experiments. Deeming it advisable to ascertain approximately the relative degrees of fluorescence possessed by solutions of these two salts, they were tested for that purpose, with the following results: A solution of sulphate of quinia, obtained by adding ten grains of the salt to a litre of distilled water, without the presence of any sulphuric acid, and allowing the mixture to stand, with frequent agitation, for many hours, was tested, and yielded an intense fluorescence. The addition of sulphuric acid to this solution increased its fluorescence to a small degree only. A solution of sulphate of cinchonia, twenty grains to the litre, was found to possess positive fluorescence; though very much less intense than that of the quinia solution, which was of but one-half its strength.

Recently I have made some fluorescent investigations of the alkaloids and salts of cinchona, partic-

"Quinia and its salts have the remarkable property of converting rays of heat into light, or, in other words, of rendering visible the ordinary invisible rays." The first half of this sentence conveys a wrong impression. The invisible heat-rays, so called, are the ultra-red or Herschelian rays at the least refrangible extremity of the spectrum. In order to convert these into light-rays, it is necessary to raise instead of to lower refrangibility, and this process of elevation constitutes the phenomenon of calorescence, and not fluorescence, to which Dr. Wood is referring. The invisible rays which are rendered visible by quinia are the ultra-violet or Ritteric rays.

† Prof. Henry Morton has made some valuable discoveries in fluorescence. His researches may be found in the Journal of the Franklin Institute, American Chemist, Chemical News, and Philosophical Magazine, since 1870. Other names more or less prominent in the history of the subject are Becquerel, Werther, Böttger, Osann, Foucault, Müller, Robinson, Pierre, Parnell, and Hagenbach; whose investigations may be seen in *Annales de Chimie et de Physique*, *Comptes-Rendus*, *Poggendorff's Annalen*, and *Philosophical Magazine*. For general expositions of the topic and for pertinent optical principles, the works of Tyndall and Schellen, the *Chemistry of Graham* and of Miller, and the *Treatises on Natural Philosophy* of Ganot, Silliman, or Deschanel, might be consulted.

ularly of the sulphates of quinia, quinidia, cinchonidia, and cinchonia. I have never seen any account of the examination for fluorescence of the sulphate of quinidia or the sulphate of cinchonidia, or any of the pure alkaloids, excepting cinchonine.

Stokes, Morton, and others describe various methods of determining fluorescence, in the papers to which I have called attention, and to which I would refer the reader. In these methods the principal elements are reflectors and lenses to condense the light, colored glasses or solutions, such, for instance, as a strong solution of ammonio-cupric sulphate, for cutting off all but the highly refrangible rays, and prisms for analyzing either the incident or the dispersed beam, or both. I have generally used either the simple plans of Herschel and Brewster, or what might be termed the Geissler-tube method, not having apparatus for other methods at my command.

Herschel allowed sunlight to fall upon the substances under examination, which, if liquid, were placed in glass vessels, as test-tubes. Brewster, by means of convex lenses, condensed the light. Vessels holding solutions may be set upon some dark material, and they may be surrounded with black paper which has an opening in it on the side towards the light, the liquid in this case being observed from above, in a direction nearly parallel to the surface. Lenses of different foci and diameters may be used, and rough comparisons made by placing different solutions side by side, or by causing them to pass rapidly one after another before the eye.

In the Geissler-tube method, a Ruhmkorff coil and double tubes are employed. These tubes consist of an inner chamber, through which the electric spark is passed, and which contains air, or some vapor or gas, in a highly rarefied condition. Surrounding this inner tube is another for holding the solution to be examined. For comparative determinations, two or more similar tubes may be introduced into the same electrical circuit; or a U-shaped tube may be used, as described by Rhoads and Pepper.

The chief preparations of cinchona which I have examined for fluorescence are—1. Acidulated solutions of each of the four sulphates,—of quinia, quinidia, cinchonidia, and cinchonia,—of the following strengths: *a*, 20 grains to the fluidounce of distilled water; *b*, 10 grains; *c*, 1 grain; *d*, $\frac{1}{180}$ of a grain. 2. Solutions or mixtures, one grain to the fluidounce of distilled water,—made without the addition of any acid, by frequent agitations during many days,—of the four sulphates, and also of the pure alkaloids, quinia, quinidia, cinchonidia, and cinchonia. In preparing the acidulated solutions, I endeavored to use the least amount of chemically pure sulphuric acid that would cause the salts to dissolve readily and thoroughly: for example, ten grains of sulphate of quinia required about five drops of acid; ten grains of sulphate of quinidia, about three drops; ten grains of sulphate of cinchonidia, about three drops; ten grains of sulphate of cinchonia, about four drops.

Each of the acidulated solutions of the four sul-

phates exhibited in a marked degree the property of fluorescence. The cinchonia salt gave the least fluorescent effect. The distinctions between the other sulphates were less positive. The order of fluorescence, from the most to the least intensity, appeared to be—1, sulphate of quinidia; 2, sulphate of quinia; 3, sulphate of cinchonidia; 4, sulphate of cinchonia. I was sometimes a little in doubt as to whether the quinia or quinidia salt gave the more decided fluorescence. Owing to the possibility of the eye being deceived in such experiments, and the fact that an extremely minute amount of a substance is capable of materially changing its degree of fluorescence, it is probable that prismatic or spectroscopic determinations in which the fluorescence is measured by fixed lines in the spectrum can alone be absolutely depended upon by investigators. The determination of fluorescence, however, in substances which have not before been examined for this property, and the ascertaining of the fact of the existence of differences in the degrees of fluorescence possessed by alkaloids and salts of the same article, are themselves matters of importance, especially from the point of view of some theories which will be advanced hereafter.

The one-grain solutions or mixtures of the sulphates, made without acid, gave distinct fluorescence. The one-grain mixtures of the pure alkaloids were very slightly fluorescent. The portions of these preparations tested could not, perhaps, properly be considered as of the strength given, as, even after they had been kept many days and agitated scores of times, the whole of the substances introduced would not dissolve; very little of the pure alkaloids seemed to be taken up by the water. The liquid examined was in each case bitter. The addition of a few drops of sulphuric acid markedly increased fluorescence, probably by bringing about completer solution or molecular distribution. The sulphuric acid and distilled water alone did not yield fluorescence.

The weaker acidulated solutions examined by me were found to exhibit the most decided fluorescence. Rhoads and Pepper, in testing for the relative degrees of fluorescence of the sulphate of quinia and the sulphate of cinchonia, compared, as I have already stated, a solution of ten grains of the former with one of twenty grains of the latter. They observed that the fluorescence of the solution of the salt of cinchonia, although twice as strong as the quinine solution, was much less intense than the latter, and hence inferred that the sulphate of quinia was by far the more fluorescent substance. Their conclusion is probably nearly correct, but their method of determination was wrong, and might lead others astray. Solutions of ten grains to the ounce have always appeared to me to be more positively fluorescent than those of twenty grains of the same body; and with still weaker preparations, unless the dilution is carried to an extreme degree, the property we are considering is much more marked. Stokes, in his first paper, in some remarks on the "Effects of Concentration and Dilution," treats of the fact that a solution which, when in a concentrated state, shows no sensible fluorescence, will

often exhibit, when much diluted, a copious appearance of that nature. He also advances a theory in explanation of this apparently paradoxical phenomenon. The degree of dilution which solutions can undergo without losing their fluorescent properties is something remarkable. I have already referred to the extraordinarily minute quantities of the sulphate of quinia which were found by Bence Jones to yield fluorescence; and I have ascertained that the same general fact is true of the other sulphates of the cinchona alkaloids. On several occasions I have examined solutions highly diluted,—at least to the $\frac{1}{10000}$ of a grain,—which have proved to be very positively fluorescent; but I have not as yet been able to make exact determinations with minute amounts, and I introduce these remarks chiefly by way of caution to other investigators.

With the acid solutions of the salts of cinchona I have performed numerous other experiments, mostly in imitation of the investigations of others with quiniferous preparations,—such experiments, for example, as analyzing the blue beam with Iceland spar and selenite for polarization phenomena, and the examination of solutions with colored glasses placed so as to intercept the incident or dispersed light, or both. I will defer the consideration of these matters to another time; and I hope also in the future to be able to give some observations on the fluorescence of the tissues before and after the administration of various substances. A method of observing fluorescence which I have sometimes employed, and which is called by Stokes the mode by *superficial projection*, is as follows: In a darkened room an alcohol flame is held close to a bottle or vessel containing the solution to be examined, which is poured into a wineglass or tumbler, holding the flame immediately over it, and placing the eye a little below the plane of the surface.

The study of fluorescence leads to a possible and, it seems to me, reasonable explanation of *cinchonism*,—the peculiar disturbance of the system caused by large doses or the protracted use of the alkaloids of cinchona.

That all matter is in motion is one of the best-established principles. Different physiological and pathological states prevail according as the conditions of motion in the body vary. Every sensation, and even consciousness, is a mode of motion. The universal ether upon which light travels not only pervades all space, but also permeates all matter. Young says that it passes through the solid mass of the earth as the wind through a grove of trees. It communicates its thrill to, and receives motion from, the atoms and molecules with which it intermingles. Fluorescent substances lower its rates of vibration, and those of the atoms or molecules. To this change are to be attributed the phenomena of cinchonism, and ultimately all the effects produced by the alkaloids of cinchona.

An illustration of Dove's, from Schellen, may make my idea clearer. He describes an ideal instrument. In the middle of a large darkened room he supposes a rod set in vibration and connected with a contrivance for continually augmenting its speed. Entering the room just after it begins to

vibrate, eye or ear cannot recognize its presence. Only the hand can feel its strokes. Soon the vibrations increase to thirty-two per second, and a deep hum is heard. The tone rises continually in pitch to the shrillest note, until the limit of sonorous vibrations is passed, when all again is silence. Warmth begins to diffuse from the rod, whose rate of vibration is still augmenting. Sound-motion has been transformed into heat-motion; but still all is dark. The vibrations increase in rapidity, and a faint red light begins to glimmer. Heat-motion has passed over into light-motion. The light brightens to a vivid red, and then is changed successively to orange, yellow, green, indigo, blue, and violet, when all again is swallowed up in night. The enormous sum of seven hundred and eighty-nine millions of millions of vibrations per second has been reached and passed.

In this illustration, sound, heat, and light are beautifully brought before the mind as modes of motion; and it may help us to comprehend processes going on in the body.

Let us for a moment imagine an instrument the opposite of that of Dove's, in which a rod, starting with a maximum number of vibrations, has connected with it a contrivance for continually decreasing its speed. Beginning with a rate which corresponds with the ultra-violet or Ritteric rays of the spectrum, the motion of the rod goes on diminishing, and it emits light which corresponds successively to all the colors of the Newtonic spectrum, from violet downward. Luminous motion then passes into that of heat; next, into sound-motion; and, finally, into mere mechanical movement.

Fluorescent substances act upon the ever-swinging molecules of the body somewhat as the contrivance for producing uniformly-decreasing velocity operates upon the vibrating rod. They lessen the speed of molecular vibration, and bring about effects in accordance with the lowered rates of motion.

Ringings or buzzings in the ears is one of the first symptoms of cinchonism or *quininism*, as the effect is sometimes called when the sulphate of quinia is the particular drug introduced into the system. In our ideal instruments we had, in the one case, sound-motion passing up into that of heat; and, in the other, heat-motion passing down into that of sound. By the use of the alkaloids of cinchona—these slowers of vibrations—molecular motion is reduced until it comes within the range of acoustic phenomena. The auditory nerve and a portion of the brain-tissue, perhaps, are made to thrill with those vibrations which give rise to the peculiar subjective impressions of sound that are experienced in the early stages of cinchonism. Disturbed vision, or loss of sight, is another symptom of cinchonism sometimes present. Waves of light must hit the retina a certain number of millions of millions of times in order that the act of seeing shall be perfectly performed, and the molecules of the retina must oscillate in response to the number of shocks or impulses which they receive. If the retina could be shaken seven hundred and eighty-nine millions

of millions of times per second, violet light would be produced in a place shut out from all external luminous sources. Molecular motion is so impeded by the preparations of cinchona, when given in excess, as to prevent the nerve-apparatus of the eye responding to the proper number of vibrations. Advanced symptoms of cinchonism, such as headache, delirium, stupor, deafness, blindness, prostration, convulsions, and paralysis, might, in like manner, be traced to a clogging of the molecular wheels of the body.

Such expressions as "periodic diseases" and "antiperiodic remedies" are suggestive, when coupled with the fact that fluorescence, which belongs so markedly to the preparations of cinchona, is the result of the reduction of *periods* of molecular vibration. An immense number of substances are to a greater or less extent fluorescent, and in the lists of highly sensitive bodies are not a few of the most prominent articles of the *materia medica*. Calorescence, the effect produced when vibrations are increased in rapidity, is also the attribute of many substances. The degrees of fluorescence of the alkaloids and salts of cinchona, and of other fluorescent medicinal substances, may be the measure of their therapeutic efficacy in many diseases; while calorescence may provide a means of determining the value of a class of bodies which act in an opposite manner upon the animal economy. These two properties or phenomena at least afford fertile hints to the thoughtful physician, who looks and longs for some scientific method of ascertaining the curative virtues of the remedies which he is compelled to employ.

The experiments of Jones and Dupré, and of Rhoads and Pepper, have proved that animal fluorescence is increased after the administration of the sulphates of quinia and of cinchonina. It has also been shown that fluorescence is decreased below a normal standard in malarial affections, and that it rises in the scale *pari passu* with the giving of the cinchona preparations, and the improvement in the symptoms of the diseases. My own experiments, some of which I have detailed in the present article, have demonstrated that the sulphates of quinidia and of cinchonidia are also decidedly fluorescent substances; and I have also determined, approximately at least, the relative degrees of fluorescence of the four salts of the alkaloids of cinchona, which order may correspond with that of the antiperiodic power of these drugs.

The whole subject of fluorescence is one of broad and beautiful suggestiveness to the medical profession, apart from the practical fruit which it has already yielded, and which it promises to future investigators. Its phenomena are among the links or bridges by which the truths of organic and inorganic nature are to be more closely united, by which physics, physiology, and pathology are to be brought more nearly to the same plane of thought. "Molecules," in the language of Clerk Maxwell, "are the foundation-stones of the material universe." Even the microscope, biology's strongest weapon, must at times give way to that eye of our inner being which visualizes the invisible; unless, indeed,

the anticipation of Newton be realized, and the world blessed with an instrument by means of which the very molecules of matter can be observed while performing their now too often mysterious vocations. Let us occasionally endeavor to look within the sacred circle drawn around these swinging molecules, even though the effort should cause our ideas to be separated, as far as the ocean sunders different climes, from that humoral pathology which too long has dominated medical thought. Instead of going in pursuit of mythical blood-poisons and impossible disease-germs, whose presence and action in the system cannot be satisfactorily demonstrated, let us, in the play of the molecular forces, seek for the solution of those mysteries of therapeutics and pathology which have for years and ages baffled the powers of the acutest minds. The ultimate problems of disease, as of all nature, are questions of molecular physics.

ON CERTAIN PECULIAR SWELLINGS OF THE CRANIAL BONES CAUSED BY RICKETS.

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I WISH to call attention to a rachitic condition of the frontal and parietal bones, which is interesting as being one of the scarcely recognized affections produced by that disease, as well as of importance in its diagnostic bearing. It seems to be a somewhat rare condition, seeing that many observant authors on rachitis fail to mention it. In the first place, in order to understand the condition, it is well briefly to call attention to the changes which rachitis produces in flat bones as well as upon the shafts of long bones. In the growing condition of these structures in the rachitic subject, the proliferation of connective tissue under the periosteum is often abnormally profuse, and the capillaries undergo corresponding increase. At the same time the ossifying processes do not take place: consequently we find upon incision in such a case, instead of true bone, a soft tissue, resembling the pulp of the spleen. It is this condition of softness and immaturity of the bone which predisposes to craniotabes, when the lesion is developed upon the occiput, though in very many cases the stage of periosteal swelling escapes observation. Under the influence of the pressure of the growing brain and of the weight of the head upon the pillow, more or less absorption takes place, and we find the typical soft occiput. This condition is well known. A similar periosteal proliferation very often takes place at the sutural margins, which are then much thickened. Thus far the lesions of the cranial bones due to rickets are quite well known. But in some exceptional cases this same lesion of the periosteum occurs on the frontal and parietal bones, and then, owing to their situation, and to the fact that they are not submitted to external pressure, an elevation occurs which may remain permanent or may disappear. These elevations are important, as they may be mistaken for syphilitic nodes, and a mistake of diagnosis, with

the consequent error in treatment, would be very serious in a case of rickets.

As usually found, these swellings, which may occur on either the frontal or the parietal bones, but more frequently upon the former, are flat, broad, and circumscribed. When this same periosteal lesion of rickets is developed on the shafts of the long bones, the tumefaction is more or less general, not strictly limited as it is upon the cranial bones. This feature of the circumscribed condition of these swellings is mentioned by Rindfleisch, who casually adverts to them. In their course these swellings grow rather slowly; rise to a height of about one line or a line and a half above the plane of the bones, even less than this, and present a smooth, rounded margin. Their surface is usually quite flat, and no nodulations are to be felt. Upon pressure, the tissue composing them feels quite firm; indeed, they are very liable to be taken as thickenings of the bones. In area, they occupy spaces of from half an inch to three inches in diameter, and they may be round or oval; generally their contour is markedly rounded. They may occur only upon one side of the skull, or, again, they may have a symmetrical distribution. Like all of the osseous lesions of rickets, they run a subacute course, and do not cause any inflammation of the skin, nor are they the seat of pain. Though not very salient, they induce visible deformities, which when occurring on the frontal bones are strikingly prominent. As to the period of apparition of these lesions, it may be stated that they are developed coincidently with or subsequent to other rachitic osseous affections. The swellings on each side may appear simultaneously, or they may be developed at different times, even with as long an interval as several months. The following case will show the cause of these swellings:

Patrick Mc— was at birth a strong child, born of healthy parents. Without known cause, he became ill when six months old, his symptoms being those of rickets. At this time swellings of the ribs, radii, and ulnæ were developed. At his ninth month a swelling upon the left frontal bone was found; and when it was a year old a similar swelling developed on the right side. When this last swelling had existed four months, I saw the child, and found that the older one was rather more than an inch and a half long by three-quarters of an inch wide, and the smaller one was half of that size. The same characters were observed as have already been given. Under proper treatment and change of air the child improved, and the various swellings diminished in size. As the shafts of the bones of the fore-arms had been affected, a slightly curved condition was induced. The swellings on the frontal bone subsided in a rather peculiar manner: a slight depression was observed in the centre of each elevation, and gradually increased until scarcely any prominence of bone was discoverable. At one segment of the margin of the right swelling, a slightly curved elevation of bone about one-sixth of an inch broad and an inch in length was found.

This case shows very well the course of these swellings when resolution takes place in them. The next case will, in a like manner, show how perma-

nent distortion of the bone may be induced. There is also in it a coincidence of lesions which is interesting as to the diagnosis.

M. E., a female, aged 14, an inmate of a charitable institution, came under my care in February, 1869. She at that time had lupus vulgaris, which affected the whole of one cheek, running up to the forehead and scalp, and under the jaw. Her whole osseous system was much distorted by a rachitic condition, which had been developed when she was a child. Upon the right side of the frontal bone, near the median line, and about one-half inch above the supra-orbital ridge, was a swelling of that tissue. It was about half an inch high, and its area was about an inch and a half. Its shape was somewhat conical, and, its surface being smooth, its margins sloped imperceptibly into the surrounding bone. To the touch it was found to be firm, being evidently composed of true bone. There was not, nor had there been, any lesion of the integument. The peculiar coincidence of the swelling and the ulceration of the face were interesting. It occurred to me at first that perhaps the case was one of hereditary syphilis, but I did not feel satisfied, as there was no syphilitic character about the lupoid ulceration. Upon inquiry, I learned that the enlargement of the skull-bone had occurred at the same time that the other swellings appeared. As the girl gave a clear history of rickets, and as its sequelæ were present, I felt positive that the swelling on the skull-bone was of the same nature. I was also told by her that at one time it was not so prominent as it was when first seen by me. The case then was one of the peculiar periosteal thickenings of the frontal bones which are caused by rickets. In this instance, the pressure of the fast-growing brain within upon the soft and yielding though thickened bone produced a prominence, which in all probability was rendered greater by the natural tendency of the bones as they grew to be rounded just at this part. That is, that as the rounded natural condition grew more pronounced, owing to the weakened condition of the bone just here it became abnormally so, leaving this bulging swelling. When the girl was about nine years old, during the interval having been weak and debilitated, she was attacked by the lupoid ulceration of the face, which in five years had assumed the proportions I have mentioned. She had been but indifferently treated in the mean time. Various opinions were expressed upon the case by those who saw it casually and who did not inquire minutely into its history. Thus, imbued with the doctrines of the French school of dermatologists, one or two regarded the lupus as an evidence of scrofula, and argued that the bone-lesion was of similar origin; others, again, that the swelling was a syphilitic node, hence the case was one of hereditary syphilis, and the lupus was another expression of it. The real nature of the case is shown by its chronology, as well as by the knowledge of the history of these peculiar cranial swellings. In the order of succession, the girl's medical history is as follows: first, an attack of rickets of great extent and severity; second, a prolonged period of anæmia and malnutrition; third, the development of

an extensive lupoid ulceration. This conclusively shows that the supposed association of the osseous with the cutaneous lesion did not exist; hence, that the former was the expression of the rachitis, whereas the lupus was in all probability produced by the general malnutrition of the patient.

This case, then, shows very clearly that these rachitic periosteal swellings may remain permanent, and may produce deformities of the skull-bones. It is very probable, reasoning from the course of swellings of like origin upon the long bones, that they may permanently remain in their original shape. Again, they may undergo resolution by gradual subsidence, leaving, perhaps, no trace, or only a slight wavy elevation. Lastly, they may, under the influence of pressure, give rise to the prominent form of swelling as described in the last case, from the causes given. I am inclined to think that the swelling in the second case was not due to hyperplastic processes,—that is, that the bone was not any thicker in it than elsewhere, but that it was simply of the same thickness, or perhaps not as thick as the rest of the bone, being merely a bulging out in consequence of pressure. This is in accordance with what we know by observation takes place in other rachitic bones.

In a diagnostic point of view these swellings are very important, though they in their early stages differ markedly from the syphilitic node, which is more prominent and not so extensive, and which, moreover, is generally multiple. If their existence were not known, perhaps they might be looked upon as an unusual form of syphilis. If attention, however, is once called to their peculiarities, I think that no mistake will occur. In the prominent condition found in the second case, there is more likelihood of error; hence in such a case the history should be carefully elicited and considered, and then correct conclusions will be arrived at.

A CASE OF PARACENTESIS THORACIS.

BY E. T. BRUEN, M.D.

THE following case occurred in the Philadelphia Hospital during the past fall, while I was resident in the house. It affords such a good illustration of the advantages of paracentesis thoracis as a method of treatment in a class of cases frequently met with, that I offer it to your readers:

M. N., æt. 25, native of Ireland, was admitted to the white nursery with a strong, healthy baby three months old. She stated that she had been taken sick three weeks before, having been confined to bed seven or eight days. The physician who attended her told her she had pleurisy.

She suffered after she left her bed from constant dry cough, with but little expectoration. There was considerable dyspnoea, even when quietly sitting in a chair, and upon the least attempt to move about this became really painful. For these symptoms she applied for admission to the hospital, in order to subject herself to treatment.

Physical examination of the chest demonstrated complete flatness upon percussion from the second rib anteriorly to the base of the thorax on the left side, and

posteriorly the same signs from the angle of the scapula downward. Above, the percussion-note was greatly exaggerated, almost tympanitic. There was entire absence of any respiratory sounds over the area of dulness. Over the apex of the left lung the respiratory murmur was much exaggerated. The left side of the chest measured an inch and a quarter more in circumference than the right side, while there was scarcely any respiratory movement.

The heart was very slightly displaced towards the right side. The woman's general health seemed very good; no emaciation had occurred.

A large pleural effusion in the left chest was diagnosed, due to the recent attack of pleurisy, and, as medical agents proper for the case might perhaps have interfered with the secretion of milk, it was determined to resort to paracentesis thoracis.

I accordingly tapped the chest in the line of the axillæ in the sixth interspace, using an aspirator with a rather small-sized trocar, having first destroyed sensibility in the part by the local application of ice, and succeeded in removing forty ounces of clear serous fluid, which very soon became like a jelly in the pail which contained it.

After the operation, the wound was closed by adhesive strips, a dose of morphia given to allay cough, and a poultice applied to the chest.

No unpleasant consequences whatever resulted from the treatment; she walked about the ward the following day, and her cough and dyspnoea had completely disappeared. She was not allowed to go out for ten days afterwards, as the weather was unpleasant, but at the end of that time no restrictions were placed upon her habits, as she was quite well. Perfect restoration of the respiratory functions of the lung had taken place; only a slightly impaired resonance, due, probably, to a thickened condition of the pleura, remained to indicate that any functional disturbance had occurred.

The only medicine she took was a tablespoonful of Basham's mixture three times daily for two weeks. The poulticing was kept up at night for a week. During the day she wore flannel, which she was told to wear constantly hereafter.

December 1.—She is still an inmate of the white nursery, perfectly strong and well.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS.

Reported by D. C. ALLEN.

SARCOMA INVOLVING THE SCAPULA—EXCISION.

GENTLEMEN,—This man, R. L., æt. 21, presents the following history: Fourteen months ago his attention was attracted by a dull, throbbing pain at the inferior border of the right scapula. He had not received an injury in this location, nor was there any observable change in the appearance of the parts. Two months later, a small tumor was observed. Its growth was progressively slow; in eight months it had attained the size of a hen's egg; and pain was felt only when recumbent upon the affected side. After this, the tumor commenced to increase rapidly; the pain, though not severe, was constant, and this continued until two months ago, when the tumor ceased to grow and the pain almost entirely disappeared. On inspection, you here observe the tumor situated upon the scapula. It is about the size of a small fetal head; there is no discoloration of its surface nor enlargement of the superficial veins. On palpation, I observe that its tem-

perature is elevated above that of the surrounding parts; also that its consistency is uniformly soft, and its surface lobulated. Moving the mass to and fro, the scapula is carried with it, so that the tumor is evidently firmly attached to the bone.

From the history of its development, its form and consistency, I conclude that it is a tumor or morbid growth. But to what class of these affections does it belong? During its period of growth it bore a close resemblance to softer varieties of fatty and mucous tumors. But its occurring at this age, the history of its development, its consistency, its being lobulated, and its general appearance, lead me to pronounce it a sarcoma. I conclude that it is not carcinomatous from the fact that there is no enlargement of the superficial veins or involvement of the lymphatic glands,—those conditions being more or less constant concomitants of such tumors; while the absence of lymphatic involvement or enlargement of the superficial veins, and the lobulated form, are equally characteristic of sarcoma. The determining, however, to which of the malignant types such growths may belong is more interesting scientifically than from a clinical point of view, governed as all these types are by the same laws in respect to their origin, progress, tendency, and termination, and therefore requiring analogous methods of treatment. Of the causes of sarcoma, little is known: it is doubtful if it is ever hereditary; it is frequently spontaneous in its origin, but in many instances is traceable to local injury or irritation. It occurs with about equal frequency in both sexes, and may appear at any period of life, but is by far the most common between the twentieth and fortieth years, being rare before the former, and very uncommon after the latter period. In reference to the treatment of this class of affections, it is rather humiliating to medical science that with all its potency it cannot make use of any measure that insures a permanent cure and immunity from recurrence of the malady.

All known local and internal remedies are alike useless either in arresting the progress or in preventing the occurrence of the disease. Nevertheless, much benefit may be effected by judiciously-directed general and local means,—by particular attention to the patient's diet, bowels, and secretions, and by the use of proper applications and attention to the affected part. Extirpation, while it cannot be relied upon as a means of permanent cure, and in many cases is positively contra-indicated, yet, under proper conditions, affords the most beneficial results of any measures which have been adopted; not only relieving pain and great anxiety, but also often resulting in more lasting benefit. This patient being in good health and of strong constitution, we are warranted in the employment of surgical measures. As the tumor involves the scapula to some extent, a sufficient amount of the bone will have to be excised to effect removal of the morbid growth. Excision of portions, or even of the entire scapula, as shown by statistics, is a warrantable operation, followed in the majority of cases by good results. On one occasion I removed nearly the whole of the right scapula for an osteo-sarcomatous affection from a man forty years of age, who made a good recovery, although, from the great size of the growth, an extensive wound was inflicted. Owing to the size of this tumor, the incision must necessarily be extensive, necessitating the division of a number of vessels, and more or less hemorrhage. The patient lies ready, and I effect the operation as follows. An incision, commencing on a level with the spine of the scapula near its middle, is carried downwards and slightly inwards, as low as the inferior angle of the scapula. The integument is dissected off from the morbid growth to the edges of the scapula on each side; and the muscles connected with the margins of the bone are detached. Passing my fingers under the scapula,

and raising it up, I sever its connection with the ribs, and, applying the bone-forceps half an inch below the spine of the scapula, cutting from without inwards, the last bond of attachment is divided, and the mass removed. The parts are excessively vascular, and bleed freely. Ten ligatures have been applied to arrest the hemorrhage, the patient having lost in all about twelve ounces of blood.

The wound will be allowed to remain open for two hours, when it will be approximated by sutures and adhesive strips, and the case treated on general principles. The tumor has the appearance of malignancy, but a microscopic examination will be made, and the results reported.

It is three weeks and three days since the operation, and you observe the wound is completely healed, and the patient is discharged to-day. The wound healed in great part by first intention. No dressing but lint and olive-oil was used; he took no medicine, was kept on light simple diet, and allowed to exercise in the open air.

Dr. West has examined the tumor. The larger part of the growth is connected with the dorsum of the scapula below the spine, measuring five inches in length, four in breadth, and two in thickness. It is lobulated, and apparently composed of numerous small growths. On dissection, the infra-spinatus muscle was found to be expanded into a thin sheet covering the posterior surface of the mass. The deeper layer of fibres are denser and more brittle than the superficial. This condition is also noticed, but to a greater extent, in the triceps and teres muscles. Microscopical examination reveals the presence of round-celled sarcoma tissue between the primitive fasciculi of these muscles, separating and compressing them. On the ventral surface of the bone a smaller growth is seen, which until the removal of the subscapularis muscle was not noticed. It is intimately adherent to the fibres of that muscle, the sarcolemma being invaded with the cells of the growth. The two growths are continuous through a perforation in the scapula. Section of the larger growth reveals at the lower extremity a soft, white, jelly-like substance, which exudes like the contents of a cyst. Higher, the tissue is of a darker color, and firmer, the color and consistence varying, however, in different portions of the growth. In some places the tissue is firm, arranged in bands which divide the mass into cavities, in which the softer portions are lodged. The color varies from purplish, through red and yellow, to white.

TRANSLATIONS.

LOCAL ACTION OF ICE ON THE ANIMAL ORGANISM (Dr. Frédéric Schulze).—The diminution of caloric in the system in general has been studied in a thousand ways, but nothing is known physiologically in regard to the local application of cold; the modifications which it produces at its point of application and in the entire organism have been ignored. This seems all the more incomprehensible, since the application of ice has come into such general use. This lacuna M. Schulze has endeavored to fill. The first question to be solved was the following: Does, or does not, the local abstraction of heat produce diminution of temperature in the more deeply situated organs? If it does, does this effect diminish with the greater depth of the organ, or does it present some other character? This question has been, up to the present time, solved in various ways. But observe the results of M. Schulze's experiments. Lowering of temperature by the local application of ice diminishes with the depth. The intestinal gases are

worse conductors of heat than the fluids of the encephalon, and hence ice applied to the head produces a more decided effect than when applied to the abdomen. After prolonged application of cold to the abdomen, the temperature falls one degree. For the lungs, which are saturated with liquids, the reduction is more considerable. No initial rise of temperature was observed, even in unnarcotized dogs.—*Gaz. Heb.*; from *Deutsches Archiv f. Klin. Med.*, 1874. X.

DIABETES MELLITUS, INTERCURRENT VARIOLA, AND DISAPPEARANCE OF GLUCOSE FROM THE URINE (Dr. M. de Carvalho: *Gazette Médicale de Bahia*, Jan. 1875).—A man æt. 25 years, small in stature, well developed, though emaciated and feeble, was admitted to the Infirmary of St. Vincent, in Bahia, November 12, 1874. He was a laborer by occupation, and a native of the province. He had been a sufferer from diabetes mel-

litus for two years, previous to which he had had good health, and no cause could be determined for the disease. The early symptoms had been great weakness in the inferior extremities, increased appetite, great thirst, and copious urination. Digestion was good, and there had been no disturbance of vision, or dermic eruption. Skin was hot and dry. No trace of disease could be found in any organ. The urine was the color of orange-juice, but lacked its characteristic smell, and the quantity voided in twenty-four hours was 4300 grammes, specific gravity 1035. Trommer's test showed presence of much sugar. A diet of animal food was ordered, all farinaceous food was forbidden, and a few laxatives were administered. Unfortunately, variola supervened on the twelfth day after admission, and the results of treatment were negative.

The following table shows the disturbance created by the acute disorder:

DATE.	COLOR.	ASPECT.	QUANTITY IN TWENTY-FOUR HOURS.	TEMP. C.	SP. GR.	REMARKS.
Nov. 13	Pale.	Limpid, with a little mucus.	4300 grammes.	25.5°	1037	
" 14	"	" " "	4200 "	26°	1034	
" 15	"	" " "	1895 "	26.4°	1034	Less thirst; copious perspiration.
" 16	"	Turbid.	2100 "	24.5°	1036	
" 17	"	"	1750 "	23.1°	1034	Transparent when fresh; less sweat.
" 18	"	"	1750 "	27°	1034	Red precipitate by Trommer's test.
" 19	"	"	1435 "	27°	1034	
" 20	"	"	1575 "	25°	1036	
" 21	Yellow.	"	1050 "	26.2°	1036	
" 22	"	Limpid.	1575 "	25°	1036	
" 23	"	Turbid.	1400 "	25°	1033	
" 24	"	Limpid.	1050 "	24.6°	1025	Invasion of variola.
" 25	Orange.	Turbid.	1050 "	24.9°	1022	Red precipitate by Trommer's test.
" 26	"	"	700 "	25.6°	1026	Abundant sediment.
" 27	"	"	875 "	25.5°	1015	Negative reaction of sugar; no sediment.
" 28	"	"	425 "	26.1°	1014	Died at 5 o'clock P.M.

The quantity of urine and the specific gravity diminished in a remarkable manner after the commencement of the fever. Coinciding with these changes there was found a negative reaction for sugar.

The patient had not been vaccinated, and other cases of variola were in the hospital at the same time. There was no doubt of the diagnosis of diabetes and of variola. Several daily examinations gave the reaction for sugar.

The dorso-lumbar pain was very significant. The temperature rose to 40° C. the first two days, and then gradually descended to 38.5° C. The eruption began to show itself on the 26th, and was well marked on the 28th, but irregular in its development and distribution. Some pustules were small and discrete, others were full and confluent. The color was from a dark red to a livid hue, which foretold danger. On this day (28th) an intestinal hemorrhage came on suddenly, and further depressed the patient, so that he died.

The coincidence of these two diseases is unique, and worthy of record. The violent febrile reaction of one disease suspended the production of sugar, which before was in great quantity. Other diseases do this, but the sugar generally returns after the secondary disease passes away.

From several cases upon record, one may conclude that any severe febrile attack occurring upon diabetes may cause the sugar to disappear temporarily from the urine. It has happened in pleuro-pneumonia, panophthalmitis following an operation for double cataract, and in some others. This suppression and disappearance of sugar from the urine is a grave symptom, and generally foretells a fatal termination.

In one case of diabetes insipidus the quantity of urine evacuated in twenty-four hours was reduced to normal, and continued so, during an attack of varioloid, but increased greatly afterwards. A distinguished colleague

of Dr. De Carvalho, in Bahia, suffered from beriberi paralytica. He had a severe variola, and in three weeks arose from his bed, cured of both maladies.

W. H. W.

THERAPEUTIC NOTES.

SNOW AS A HÆMOSTATIC.—Dr. Hane (*Centralblatt für Chirurgie*, No. 38, 1874) recommends very highly snow as a means of preventing hemorrhage in those operations in which Esmarch's method cannot be used. A handful of dry snow pressed upon the bleeding wound he found in a case of tracheotomy to act most favorably, soaking up the blood like a sponge and arresting the bleeding.

IODINE caustic is prepared by dissolving four grammes of iodine in eight grammes of glycerin. It is used in lupus by applying it once every other day, and covering the parts with gutta-percha. This treatment is continued for several weeks.—*Canada Lancet*.

SCIATICA.—Dr. I. Pretz (*Wiener Medizinische Presse*) gives as his personal experience the following facts. Having an attack of sciatica for six months, he tried all the ordinary remedies, with no avail. Observing that his attacks were slighter after eating, he determined to eat as often as the pain recurred. This was often twelve times in twenty-four hours. He constantly improved under this treatment, and in about two months entirely recovered. Two other cases were afterwards treated with similar results. He accounts for the result by the development of heat from the food and drink.

PHILADELPHIA
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 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

WANTED—A LAW TO PUT AN END TO PROFESSIONAL MURDER IN PENNSYLVANIA.

WE are in receipt of the memorial of the committee appointed by the State Medical Society to approach our Legislature in regard to the subject of laws regulating the right to practise medicine. We shall not reprint the document, because it will be very widely circulated in the State, and because it contains little or nothing with which the profession is not already acquainted. Its arguments are forcibly stated, and are unanswerable. It is simply astounding that whilst hedges and guards are placed by law around the enclosure within whose sacred bar are the members of the legal fraternity, any one, no matter how ignorant he, she, or it may be, can practise medicine in this State at will.

Quackery, druggists prescribing, first-course students, ignorant half-educated "regulars," homœopaths, and all manner of medical villanies certainly hold high revel here undisturbed. It is notorious that very frequently young men, richer in ambition than in money or conscience, study at the colleges for five months, and then engage in practice in some rural district until they shall have saved sufficient money to pay their expenses during a tarriance in the city. Many of them practise in this way for years,—some permanently. Often, these worthies do not find a diploma at all necessary for practical success. But if one be wanted, it can be

bought very cheaply, or any professional chirographer will write one for a trifle, putting in a few extra flourishes to prevent the ignorant from perceiving that the college represented as being in St. Louis, Boston, or where not, is a myth, as, of course, are also the professors who sign the document.

About two months since, by a curious combination of circumstances, without violating the Code of Ethics, we saw in consultation a case which had been treated by a gentleman who, under the ægis of an "Eclectic" diploma, walketh as the pestilence at noonday among the lower middle classes of the northern portion of our city. The patient apparently was suffering from enteritis, producing more or less paralysis and consequent partial obstruction of the bowels.

With a peculiar reverential but self-important air, our doctor said to us in the ante-room, "Professor, I am no homœopath; I am a regular physician. I am no dealer in infinitesimals. I treat actively. This man wanted his bowels open. I was bound they should be opened, and, by our father Æsculapius, they have been. I gave this man, in thirty-six hours, one hundred and twenty grains of blue pill, half an ounce of turpentine, eight ounces of castor oil, and twenty-eight drops of croton oil;* then I put a blister all over his abdomen, and this morning he is being cupped." (With a flourish worthy of the Pharisee in the temple) "His bowels are open; he is better."

On going into the room, we found the poor wretch almost dying, with a pulse one hundred and fifty and thready, his abdomen a raw surface from a recent severe blister, but covered with rows of cups placed as closely and as regularly as could be, some filled to the top, others freshly put on for the second time, with the blood spirting into them. Turning to the patient and pointing to the cups over the raw surface, we said, "Don't these hurt you frightfully?" In the faint, hollow whisper of impending death came back the answer, "Of course they do, doctor; but," looking at his wife, about to become again a mother, with her three little children clinging to her skirts, "my family are dependent on me; I would suffer anything to get well." Of course the grave soon closed over this victim of legalized murder.

In Pennsylvania, such is the law that this harpy is before it guiltless.

No doubt this was an extreme case, but not such

* Dr. Taylor, in his work on Medical Jurisprudence, says that fifteen to twenty drops of croton oil might kill a healthy man; and a patient suffering from inflammation of the bowels would of necessity be more susceptible than a person in health.

a very rare one, we fancy. What with the regular colleges turning out yearly their hundreds of barely half-educated physicians, the irregular schools graduating any who can afford a fee, the independent candidates for professional fees who scorn a diploma, to say nothing of herb doctors, Indian doctors, old-women doctors, and their ilk, we in all honesty believe that the lower stratum of medical practitioners in this State actually kill or ignorantly allow to die hundreds and thousands of the poorer and even of the richer classes.

We are most strongly in favor of some legislation which shall check this unbridled license, for which, it may be thought, not the medical but the legislative profession is chiefly to blame. The medical profession, however, shares the responsibility. It is in a measure owing to its supineness in the past that murder stalks in the guise of philanthropy through every byway of our commonwealth, and enters not rarely even the palaces of the rich. Let the committee bring this memorial and its subject before our legislators in such a way that they must pause from party wrangling to grant a serious hearing; and then, if no good results, our skirts will be clear.

We are aware that it is hardly probable that any laws will be passed which will accord entirely with our desires; but better by far the lesser of two evils; better an examining board which leaves entirely out of view all questions as to therapeutics and examines only on the other branches, than no examining board at all; better even that the diplomas of the homœopathic schools should be recognized by the State, than that no diploma at all should be required.

By all means, if possible, however, let us do away with trusting to any diplomas, and have simply an examining board, without whose certificate of qualification it shall be illegal for any one to enter upon the practice of medicine in this State.

CORRESPONDENCE.

BALTIMORE, January 2, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Medical circles have been comparatively quiet here during the holiday season just closed. Our three medical schools gave their classes a rest. At the Washington University, on Wednesday night, Prof. Chancellor, Emeritus Professor of Surgery, lectured on "Physics and Physicians," before a good audience of physicians and students. Dr. Chancellor filled the chair of surgery for five years, and contributed much to the success of the school. His lecture was rather dry, and lacked the freshness of a recent compo-

sition. One could not avoid the conviction that it had served as a valedictory or opening address at some former period.

The College of Physicians and Surgeons has, unfortunately, had some disagreement among the members of the faculty, over the question of filling the chair of anatomy. The majority elected Dr. Bevan to the position, whereupon Drs. Byrd and Murray resigned. The vacancies thus occasioned have been filled by the election of Dr. Erich to the chair of diseases of women and children, and of Dr. A. Atkinson to that of materia medica. The chair of physiology still remains vacant.

The medical societies are somewhat agitated over the provisions of the new health law, which went into effect yesterday.

The mortuary statistics of Baltimore have been proverbially unreliable, being made up from the returns of the different cemeteries,—no certificates being required. The new law allows of no interments without a certificate from a physician or coroner, and also requires regular returns of all births, except those of illegitimate children, to be made by the attending physician within six days after delivery. The law may not be perfect, but it is a step in the right direction. That a change was needed is indicated by the fact that according to our health reports *colic* was one of our most fatal diseases.

At the last meeting of the Baltimore Medical Association Dr. P. C. Williams related a case of temporary aphasia occurring in a young man who during the war had been a hospital steward, and, owing to exposure, had suffered from paralysis of the seventh pair of nerves, from which he had recovered. Having had some difficulty with his lady-love, it was noticed at breakfast next morning that his cup fell from his hand, and that he was unable to speak. He could understand all that was said, but could not command language to reply. In order to test the extent of his difficulty, the doctor asked him to write the name of the lady, which was Elise: he wrote, A-Ea-Elia-Ela, then gave it up in disgust. The doctor, thinking it was from temporary causes and temporary congestion, ordered potass. brom., gr. xxx; tr. gelsem., gtt. xl, t. d.

At the next visit he had so far improved that he wrote her name correctly on the second trial. To show that the cure was not complete, he was asked to write his own name, and Augusta was the result. The doctor's name he wrote Walli-Wallians. On the third morning he was entirely relieved, and could speak as well as any one. During the whole time he perfectly appreciated the fact that his answers were incorrect.

At the same meeting Prof. Arnold related a case showing some of the effects of syphilis on the nervous system. A man 38 years old, who had led a fast life, had imperfect paraplegia, which prevented locomotion. He could move in bed, but when he tried to get out he wriggled about and required assistance.

There was dimness of vision, some difficulty of speech, slow articulation, and partial paralysis of the left arm and hand. There were suspicious patches between the

shoulders, deficiency of hair and eyebrows, and scars in the groin. Dr. Arnold, thinking that antisyphilitic treatment would be of benefit, gave one-sixteenth of a grain of corrosive sublimate thrice daily, and in fourteen days there was much improvement in the general condition, as also in the local symptoms, with the exception of vision and speech. He remained in hospital only five weeks, so that a complete cure was not effected.

Prof. Chew asked whether the presence of muscular power in connection with inability to walk did not seem to indicate locomotor ataxia; whether the syphilitic poison may not have affected the nervous centres, and thus have produced a syphilitic form of locomotor ataxia.

Prof. Arnold did not think so. The pains like electric shocks, met with in ataxia, were wanting. The defect in vision was confined to one eye; the manner of walking was different; the man swung his leg around, and did not bring his foot down flat. The partial success of the treatment was also a point in forming a correct opinion.

Several gentlemen related cases showing the tolerance and beneficial effects of large doses of potass. iod. Dr. Murdock has given as high as grs. lxxx three times a day, with less disturbance to the system than gr. v to x usually produce. The most marked change was in the pulse, which always increased from 70 or 80 to 90 or 100 beats per minute. More anon.

MEDICUS.

HOSPITAL OF THE P. E. CHURCH, January 9, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The *Medical Times* of January 9, 1875, received, and contents in reference to the Episcopal Hospital noted, and I respectfully state, first, that no application from the Dispensary Staff, as a staff, has been received by the Board of Managers for the appointment of specialists; secondly, that a portion of the physicians of the Dispensary Staff have applied to the managers to take the matter of appointing certain gentlemen as specialists into consideration, and they, the managers, hold the matter under advisement, waiting further information on the subject. Hence you will perceive that you were incorrectly informed in the first place; and, as no action has been taken by the Board in the matter, you are premature in your statement in the second place; and hence you have no case at all.

Truly, yours, S. R. KNIGHT, M.D.,
Superintendent.

[We are glad to learn that, having been misinformed as to the facts, we "have no case at all," and hope the Episcopal Hospital may soon openly join the band of progressive institutions.—ED. P. M. T.]

REMOVAL OF FOREIGN BODIES FROM THE EAR (*The Lancet*, December 5, 1874).—Dr. John Cleland suggests that in removing foreign bodies from the ear the point of the probe or needle used for extraction should be placed *below* the object to be dislodged. By so doing it is placed between two inclined planes, and is readily and easily expelled.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

CONVERSATIONAL meeting held Wednesday, October 28, 1874, at 8 o'clock P.M.

VICE-PRESIDENT DR. I. S. ESHLEMAN in the chair.

Dr. STETLER asked what the experience of the members was in regard to the prolonged use of chloral hydrate. He had seen statements of its bad or injurious effects upon the brain, spinal cord, heart, mucous membranes, etc., from long-continued use, and was very anxious to learn the truth or falsity of the statements. He has a patient, *æt.* 75 years, to whom he has given it at bedtime in from eight- to fifteen-grain doses for four years, to procure sleep. The patient, having read of the terrible effects of its prolonged use, was unwilling to continue it, but could get no sleep without it, having lain awake for five hours, and then felt himself compelled to resort to the accustomed dose. There is no pain, but great nervousness, and the patient seems disposed to attribute part of the latter to the long use of hydrate of chloral. Can this be so?

Dr. WILLIAM GOODELL thought that so potent an agent as chloral could not be continuously used without grave constitutional symptoms. Clinical observations to that effect had, in fact, been frequently reported in the medical journals. It is, notwithstanding, a most valuable medicine, but in the long run not so trustworthy as opium, for it frequently induces a maudlin intoxication instead of the desired narcotism. A few doses of fifteen grains each, administered every quarter of an hour, will not only allay the sufferings of labor, but also dilate a rigid os uteri without weakening the expulsive pains. In this respect its action is decidedly superior to that of opium. In puerperal convulsions forty grains by the mouth or two drachms by the rectum, repeated at proper intervals, had, in his hands, acted like a charm. He attributed the strong prejudice which some physicians entertain against this drug to their unfortunate experience with an impure article which was shoved on the market some three or four years ago. It caused an inexplicable epidemic of wild delirium and of transient but violent mania. Quite a large number of these cases occurred in the practice of his friend Dr. H. Y. Evans, who was led to investigate their cause, and, finally, to discover it. If his memory served him no trick, this impure article was imported in the form of round dingy slabs, as large as a dinner-plate.

Dr. YARROW asked Dr. Goodell whether he had found chloral equal to full doses of morphia as an agent for dilatation of the os; morphia, in his experience, did not always allay, but rather seemed to increase, the uterine efforts.

Dr. BURNS, of Frankford, said that he had used hydrate of chloral considerably for several years, and was favorably impressed with its effects in the case of a lady suffering with irregularity of the heart's action and much wakefulness. She used it for two years with much benefit, and is now comparatively well. In another case, that of a very intelligent gentleman, he had used it for the period of one year. This gentleman was affected with extreme noises in his head, dreading to fall asleep, for in doing so these noises, as he figuratively described them, seemed to him as if all nature was in chaos, "and the elements crashing together." This case seemed as if epilepsy was about setting in. Chloral in this case has done good service; more so than bromide of potassium, which was used freely. A very unpleasant feeling of oppression came on, with

faintness and inability to expire, the air passing out of his lungs, as he described it, "in a whistling manner." Dr. Burns, thinking this might in some way be due to the anæsthetic effects of the chloral, suspended the drug and substituted extract of *nux vomica*, with the result of relieving him very soon; neither has the dyspnœa returned. In a very severe case of tetanus in a boy, produced by the cicatrix of a wound on the face from the kick of a horse, it was the chief means of cure, although *cannabis indica*, bromide of potassium, hypodermic injections of morphia, etc., had been freely used. This case continued six weeks; injury to the supra-maxillary nerve being the pathological condition.

In mania a potu, the chloral has done good service in his hands. It produces less cerebral disturbance after its use than opium and its preparations. Neither does it, in his opinion, produce the habit or craving for its continuance, as opium invariably does.

In cases of insomnia, irritability of the nervous system, and general restlessness, he has been in the habit of giving ten grains before bedtime, repeated in half an hour; if not composed, continue hourly until the effect is produced.

He believes chloral to be contra-indicated in cardiac debility, phlegmatic temperaments, or in cases of exhaustion from shock, or low condition of vitality, where there is much vascular excitement with a free pulse and nervous tension.

Dr. H. H. SMITH said, in his experience it was an uncertain remedy. In one case of delirium tremens he had given one hundred and twenty grains at one dose, and afterwards another of seventy. In another case twenty grains were given every two hours without any perceptible effect. He said he had no doubt as to the reliability of the drug he had used.

Dr. ATKINSON agreed with Dr. Goodell. He had found chloral very useful, and especially in puerperal convulsions. He thought that the fact that there were some forms of the article that did not seem good, and were apparently without effect, might account for Dr. Smith's experience.

Dr. HAMILTON said, in reply to a question by the President, that his limited experience with chloral had led him to think that its action was somewhat irregular, falling short of, or exceeding, at times, what had been anticipated. In regard to its beneficial influence in certain obstetrical conditions, the evidence seemed to be favorable. In one of these conditions, however, —misplaced labor-pains,—in some instances exceedingly severe and vexatious, there was, perhaps, no medicine so useful as opium or morphia, dependent for their tranquillizing effects in such cases probably to their well-known power to re-establish perverted correlative movements of the nervous system.

Dr. COLLINS read an abstract, a translation from the *Wiener Medizinische Wochenschrift*, a case reported from the Gynäkologie University, Clinic of Prof. Karl Von Braun Fernwald, entitled "A Case of Extra-Uterine Pregnancy, with Rupture of the Ovum in Early Period of Pregnancy and Development of the Fœtus in Abdominal Cavity to Full Period."

Dr. D. HAYES AGNEW said he had not had a large experience in these cases. During the last five years he had seen three cases. The last case progressed as a normal pregnancy. She engaged her doctor. She was taken in labor, and her physician summoned. The progress being delayed, a consultation was called. No advancement being apparent, another physician was called in to take charge of the case. He was, at this juncture, called to see the case, and on examination could trace what was supposed to be an arm or leg through the abdominal parietes, the head lying in Douglass's cul-de-sac. The symptoms became urgent, and the child, full-grown, was removed through the pos-

terior wall of the vagina. The placenta was found loose, and readily extracted. The patient did well for a few days. An injection of a solution of the permanganate of potassium probably caused the inflammation of which she died. The attachment of the placenta was not determined. Another case was in the northern part of the city. She went beyond the normal period of gestation. The uterus was retroverted. There was retention of urine, and a prominence in the recto-vesical pouch along the side of the uterus. His first impression was that it was an abscess, but the use of an exploring-needle procured a fluid like the liquor amnii. The case died, and although no thorough post-mortem was permitted, yet it was sufficient to determine that the cause of death was hemorrhage. The third case died of peritonitis.

Dr. ATKINSON spoke of a case of extra-uterine pregnancy in the hands of an irregular practitioner. The child had died two months before its full term. The child was passed per rectum in pieces, such as parietal bones, hair, ribs, etc. The mother's suffering was intense, but she has recovered.

Dr. GOODELL remarked that he had seen two very distressing cases of death from tubal and one from a ventral pregnancy. He had first mistaken the latter for an attack of pelvic peritonitis, and afterwards for a retroversion of the gravid womb, before he had arrived at a correct diagnosis. He wished to deliver the woman by an incision into Douglass's pouch, but was overruled by her friends. He attributed the absence of a cyst in Dr. Collins's case to an early and bloodless rupture of the Fallopian tube. The fœtus escaped into the cavity of the abdomen, and had lived on, because its mother had survived this accident, and because the placenta had not been dislodged. He believed that extra-uterine fœtations without cysts would be more frequently met with were it not that, upon the rupture of the tubal cyst, the woman usually perishes from hemorrhage.

He was called to see a patient Aug. 1, 1873, nearly three months married; no menstrual show since marriage, though regular previously. Complaining of severe pains as though threatening abortion. General symptoms of pregnancy having been manifest, she was placed upon usual treatment, which was effectual so far as to relieve symptoms. Aug. 5, his attention was called to a darkening of umbilicus; slight pain had been continuous since last visit; there now appeared a show of blood from vagina. Aug. 8, pain renewed with great severity, continuous, but greatly exaggerated at intervals; patient very weak and in great nervous excitement. Aug. 9, symptoms much the same. Aug. 10, sudden fainting, cold perspiration, pulse very rapid, tendency to collapse; uterus normal in size; parts very sensitive, hot and throbbing. Supposing a case of tubal fœtation, consultation was asked. Two physicians saw the patient, one Aug. 11, morning, in my absence; attributed condition to disorder of liver, and left suggestions (symptoms at this time had become milder). The other, in consultation, 1 P.M. of same day, suggested pelvic peritonitis, and an expectant treatment was entered upon.

Patient failed to recover as was expected. A tumor presented above the pubes, gradually becoming ovoidal and extending towards the umbilicus; skin becoming tense, and parts painful on pressure; a dull throbbing pain continues, extending to back; uterus still normal, but an enlarged mass back of and above it. This continued until Aug. 29, when, being seized with a strong desire to defecate, a gush of clotted blood and water nearly filled the chamber. An odor as of "rotten flesh" compelled the family to throw it away at once, thus preventing an examination. The tumor subsided at once, as well as all inflammatory symptoms. Rectal

examination revealed large rent above and back of the uterus, but tenderness of parts and debility of patient prevented further examination. No indications for treatment were present; parts healed kindly, and patient recovered with no untoward occurrence.

Dr. ESHLEMAN presented a specimen of an umbilical cord from a still-born child, that had expired a few days prior to birth. The cord was unusually short, and about twice the usual thickness. It was very firm, and imparted a gristly sensation when cut. The placenta was healthy in appearance. The child was well developed, and at the eighth month. This is the fourth child lost within four years, each preceding one about a month earlier than the following one. The third one was lost at seven months, being born alive, but respiration could not be well established before it expired. These children had no marks of disease about them. The father had suffered from a primary sore six years ago, accompanied with glandular swellings, which had been scattered without suppurating. Dr. E. attributes the death of these children to inherited syphilis, and sees in each child its gradual diminution, and proposes aiding its elimination in the parent by iodide of potassium, with the expectation of reaching at the fifth or sixth birth a viable child.

GLEANINGS FROM OUR EXCHANGES.

A NEW CATARACT-KNIFE (*The Lancet*, Nov. 28, 1874).—C. Bader, Ophthalmic Surgeon to Guy's Hospital, gives the following description of a new knife, which has of late been used to obviate the inconvenience arising from the inward movement of the eyeball when commencing the corneal incision in the operation for cataract. It so thoroughly answers its purpose that it can be recommended in preference to other cataract-knives. If, standing behind the patient, we wish to operate upon the left eye with the right hand, and upon the right eye with the left hand, two different knives—one for the right and one for the left eye—are required, unless the operator prefers using the right hand only, when the bent knife, used with the right hand for the left eye, may be used for the right eye also, commencing, however, the incision at the outer margin of the cornea. By the employment of the bent cataract-knife, commencing the incision at the inner margin of the cornea, great control is obtained over the movements of the eyeball, whether the incision be made upwards or downwards. The natural inclination of the eyeball to roll inwards towards the nose when operating in the usual manner, instead of being a source of trouble, becomes a help by the use of the bent knife. The blade is somewhat wider than that of Von Graefe's knife, the point is in a line with the back, and the blade is bent away from the handle in such an angle as to admit of easy access to the inner (nasal) margin of the cornea.

FLEXIBLE CATHETER FOR IRRIGATING THE BLADDER (*The Medical Record*, Dec. 1, 1874).—Dr. Stuart Eldridge describes as follows an instrument for the irrigation of the bladder in certain cases in which the rigidity of the ordinary instrument renders its use inconvenient or impracticable.

Through the side of a soft rubber catheter (No. 10 to 12, English gauge) an opening is made by a broad needle, or the point of a lancet, at the distance of an inch and a half from the open end of the tube. Through this opening force the point of an ordinary gum catheter of such size as to lie very loosely in the bore of the rubber instrument. In passing the smaller catheter into the larger one, the surface should be well wetted, and the stylet retained until the point of the gum instru-

ment has passed into that of the rubber one, when the stylet should be removed and the instrument is ready for use. In a similar manner an irrigator may easily be extemporized from an ordinary metallic catheter, either male or female, by adjusting upon the open end of the instrument a short piece of rubber tubing, through the side of which a gum catheter is passed in the manner described above.

NITRIC ACID AS A NERVE-DESTROYER (*The Lancet*, November 28, 1874).—At a recent meeting of the Medical Society of London, Mr. Napier related a case lately under his care, in which, the teeth in both jaws being reduced by mercurial salivation and other causes to the condition of sharp jagged spikes, productive of much suffering and discomfort, and anæsthesia in any shape being objected to, he had employed an original form of treatment, giving rise to no pain. The process of filling having been satisfactorily accomplished by means of the ether-spray, locally applied, he cautiously and very gently touched the exposed portion of the nerve of each tooth successively with a pencil of hickory-wood dipped in nitric acid; by which simple method it was rendered insensate, and the mouth prepared for the reception of artificial substitutes. Mr. Napier was anxious that the principle involved should receive a fair share of attention, as he held the present system of nerve-demolition to be at variance with true science.

DISLOCATION FORWARDS OF THE STYLOID END OF THE ULNA (*Edinburgh Medical Journal*, October, 1874).—Mr. T. E. Purdom records the case of a man whose hand was accidentally pushed in between the rollers of a planing-machine, his fore-arm being likewise drawn in, in a slanting direction. The rollers, placed one above the other, gave a little, so far saving the arm. The hand and wrist were much twisted. On examination, the limb had a curious appearance, there being a hollow on the ulnar side posteriorly, while in front, just above the wrist, a hard swelling was felt, and was diagnosed to be the styloid end of the ulna, displaced forwards. The elbow being fixed, extension being applied to the hand, and pressure to the projecting bone, reduction was easily accomplished, the bone giving an audible click as it returned to its place. The fore-arm and carpus were then placed in two well-padded splints.

VERTICAL LUXATION OF THE PATELLA (*The Medical Record*, Dec. 1, 1874).—Dr. S. P. Davis reports the case of a servant-girl who, while sitting upon the floor, suddenly reached forward to seize a child, and found immediately afterwards that she was unable to move her leg.

On turning the patient upon her back, the left patella was plainly seen in a condition of "vertical displacement,"—i.e., turned upon its inner edge, so that its upper surface looked towards the opposite knee. It was rigidly fixed, and the limb was entirely helpless.

The patient was etherized as she lay upon the floor. The whole limb was then elevated by an assistant, so as to relax the muscles in front of the thigh, and, by forcibly crowding down these muscles towards the knee with one hand, manipulating the patella at the same time with the other, reduction was effected with the utmost ease.

TETANUS FOLLOWING SYME'S AMPUTATION OF THE FOOT (*The Irish Hospital Gazette*, December 1, 1874).—Dr. Barton operated on a woman, æt. 43, who was suffering from an epithelial disease of the foot. He performed Syme's amputation, chloroform being used effectively, and Esmarch's bandage applied from the toes to above the ankle. The arteries were all twisted. Extensive sloughing of the flap took place. On the ninth day the patient complained of difficulty of swal-

lowing; on the tenth, all the symptoms of tetanus were well developed; spasms occurred with great frequency and severity, and on the following day she died. The treatment consisted of the administration of chloral, morphia, and enemata of beef-tea and brandy.

MISCELLANY.

A HILL OF SULPHUR.—One of the most remarkable deposits of native sulphur as yet discovered is a great hill composed of the almost pure article found some two years ago at a distance of thirty miles south of the Union Pacific Railway, and nine hundred miles west of Omaha. This marvellous deposit is found to consist almost wholly of sulphur, containing only fifteen per cent. of impurities. The best deposits heretofore available are those found in Sicily. The principal supplies for the manufacture of sulphuric acid come from there; the deposits contain thirty-five per cent. of impurities and sixty-five per cent. of sulphur. Our Western sulphur hill, therefore, is much the more valuable, and promises to become, ere long, of great importance to the country. —*The Drug, Paint, and Oil Trade.*

By royal decree, female students in Sweden are to be admitted on the same terms as males to all the examinations in the universities, except those for the licenses in theology and law.

A COACHMAN of an undertaker in London recently contracted smallpox by assisting at the funeral of a gentleman who had been brought from Jersey with the disease.

SOMETHING less than 180,000 marks have been devoted by the Berlin Government to the erection of a Seaman's Hospital at Yokohama.

The London *Lancet* is said to net an annual income of nearly twenty-five thousand dollars.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Dr. H. C. Wood, in his clinical lecture "On the Use of Digitalis in Diseases of the Heart," published in your journal Nov. 14, 1874, induced me to try it according to his mode of administration in certain cases, —i.e., in larger and more frequent administrations. I did so, and with the most surprising results in the patient's favor.

Mr. I., aged 63, was suffering from dropsy, due to two abnormal conditions of his heart,—mitral insufficiency and dilatation. He was treated with digitalis, about fifteen drops three times a day, morphia at night, etc. The dropsy was partially removed several times by the free use of elaterium, but quickly returned. He was now too debilitated to undergo a copious purgation. Moving his legs, even, was impossible. At the time the lecture referred to was published, he presented the following symptoms: pulse 130 and very feeble, respiration rapid and labored; at times a fierce short struggle would ensue for more air; face cyanosed; recumbent position impossible. The dropsy, as stated, was general, and near its maximum; the skin of his legs presented a purplish discoloration, and was stretched to its utmost tension; cough persistent and very troublesome, due, no doubt, to the infiltration of water in the lung-tissue. The patient, in short, was drowning, and, unless speedily relieved, must die. Urine albuminous and scanty. Ordered one-half grain of digitalis with one grain of squill every two hours. In thirty-six hours the pulse was down to 70—a full, soft wave greeting my finger; urine passing in immense quantities. Patient felt much better, and was sorry he did not have a grist-mill to run, since he could furnish the water-power. Medicine reduced to six administrations

a day, then four, three, two, and one. In eight days the dropsy had entirely disappeared, leaving the man almost a "living skeleton." His attenuated frame and wrinkled face told of the intense physical suffering endured before digitalis, in *doses large and oft repeated*, beat back the tide and manned the pumps. He sleeps well, eats well, and, with tonics and a liberal diet, is rapidly regaining his strength. There is now a buoyancy in the old man's step, and a warmth in his hearty grasp, contrasting strongly with the utter helplessness of his former state and the snaky coldness of his dropsied hands.

A. K. MINICH.

January 6, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The following transcript may be of interest to your readers, and I give it in the hope that I may elicit some information in regard to the really-frightful plague which is so briefly chronicled. The item I discovered this evening in an old colonial newspaper which announces itself as follows:

"NEW-ENGLAND WEEKLY JOURNAL,

"Containing the most remarkable occurrences, foreign and domestick.

"Monday, April 8, 1728."

And at the bottom of the second and last little page I find—

"BOSTON.—Printed by S. Kneeland and T. Green, at the Printing house in Green Street, where advertisements are taken in."

Among other foreign intelligence of the week is the following for November 11 (probably 1727):

"LONDON, November 11. . . —The fever which raged here and in the country is very much abated as to its Frequency and Fatality; but they write from Amsterdam that for five weeks their Burials have amounted to 600 (!!) per week, and they have now risen to *seven hundred*; and it is reckon'd they had 40,000 persons lying sick in that city."

Can the above account be corroborated by contemporaneous evidence? or is the paragraph simply a feat of colonial journalism, that will put our latter-day *canards* to the blush?

SURGEON.

FORT STOCKTON, TEXAS, December 19, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The following advertisement is culled from one of our daily papers. It is against ethics for specialists to advertise openly. Why does not the medical press protest against specialists advertising on the sly?

THE GYNÆCOLOGICAL HOSPITAL and Infirmary for Diseases of Children, No. 1624 Poplar street. Open daily (Sundays excepted), from 10 to 12 o'clock A. M., for the gratuitous treatment of respectable women suffering from diseases peculiar to their sex; also for diseases of Children.

Attending Physicians:
Dr. JOHN J. REESE, Dr. JOSEPH A. McFER-
RAN, Dr. THEODORE H. SEYFERT.

SUBSCRIBER.

["Subscriber" must be one of our numerous recent patrons; else he would scarcely have asked the question which he has.—Ed. P. M. T.]

Dr. W. H. WINSLOW has been appointed Assistant-Surgeon in the Eye and Ear Department of the Children's Hospital.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society will be held at the Hall of the College of Physicians, Wednesday, January 27, 1875, at 8 o'clock P. M.

Dr. Cheston Morris will read a paper on "The Use of Alcohol in the Treatment of Disease."

The medical profession in Philadelphia are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 12, 1875, TO JANUARY 18, 1875, INCLUSIVE.

CRONKHITE, H. M., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Yuma, California, and, when relieved by Assistant-Surgeon Loring, assigned to duty as Post Surgeon at Camp Verde, A. T. S. O. 113, Department of Arizona, December 26, 1874.

MOSLEY, E. B., ASSISTANT-SURGEON.—Assigned to duty at Mobile Barracks, Mobile, Alabama. S. O. 4, Department of the South, January 14, 1875.

SATURDAY, JANUARY 30, 1875.

ORIGINAL LECTURES.

ON FEVER.

ABSTRACT OF TONER LECTURE.

Delivered January 20, 1875.

BY H. C. WOOD, JR., M.D.

THE definition which declares fever to be "an acute derangement of all the functions," although certainly true, yet fails to give to the mind any idea of the phenomena of fever. When these are analyzed, it will be found that the most important of them are capable of being grouped in three sets: acceleration of the heart's beat and disturbance of the circulation; nervous disturbance; elevation of bodily temperature. Of these groups, the first two are merely secondary to and dependent upon the third: *i.e.*, the essential part of fever is elevation of temperature,—an excessive production of bodily heat. The demonstration of this fact necessitates the proving of the following propositions, the truth of which once acknowledged, the final conclusion becomes inevitable.

First: External heat applied to the body of the normal animal so as to elevate the temperature produces derangement of the nerve-functions, of circulation, etc., etc., precisely similar to those seen in natural fever, the intensity of the disturbance being directly proportional to the rise in temperature.

Second: Heat applied locally to the brain or to the heart produces those disturbances of the functions of the organ which are familiar phenomena of fever, the intensity of the disturbance being directly proportionate to the amount of heat in the organ.

Third: The withdrawal of the excess of heat in fever is followed by a relief of the nervous and circulatory disturbances.

When a dog, cat, or rabbit is confined in a heated atmosphere, the temperature of the animal rises, and at the same time the pulse-rate becomes *pari passu* more rapid, the breathing more hurried, and stupor, coma, partial paralysis, convulsions, and, finally, death occur. Although man is able to bear extremes of temperature far beyond the point which would prove fatal to any given species of animal, he is as susceptible as the animal to an excess of internal or bodily heat. The terrible mortality of sun-stroke, or thermic fever, is a witness to this susceptibility.

These facts, which have been developed more in detail elsewhere, are certainly sufficient to prove that an exposure to external heat will produce all the phenomena of fever.

In a series of experiments upon the action of heat on the nerve-centres, the brains of cats and rabbits were heated by the application to the head of a pig's bladder through which was passed a stream of heated water. It was found that coma, with or

without convulsions, was produced, sometimes coming on gradually, in other instances developing very suddenly; but in either case death was finally brought about by paralysis of respiration, or apnœa. As in these experiments it was found that pouring cold water upon the head at once relieved the coma, the conclusion is logically irresistible that the coma was produced by the heat. The degrees of temperature at which, in the locally-heated brain, consciousness was lost and at which death occurred, were found to correspond closely with the degrees at which the same phenomena took place when a general augmentation of the bodily heat was artificially produced.

It having been determined that heat applied to the brain of an animal is capable of causing cerebral symptoms similar to those seen in fever, the next point is the action of the same force on the heart. When the heart of a frog is removed from the body and exposed to a rising temperature, the pulsations constantly become more and more rapid until a heat-limit is nearly reached, at which the action of the heart ceases.

It is, of course, impossible to experiment directly upon man, but we have very direct evidence that heat affects his organs as it does those of animals. Dr. Liebermeister analyzed the records of two hundred and eighty cases of acute disorder not directly affecting the brain or heart, but accompanied by a rise in temperature, and the following table shows with what great regularity the pulse rises also:

Temperature (Cent.)	37°	38°	39°	40°	41°	42°
Pulse, Mean,	71.6	88.1	97.2	105.3	109.6	121.7

In regard to animals, then, the second proposition has been actually demonstrated by rigid experimentation, and in regard to man it is a scientific impossibility that it be other than true.

The proof of the third proposition is contained in the following experiment, which was repeated several times with similar results. A rabbit was placed in a heated atmosphere, and allowed to remain there until consciousness was entirely lost. It was then taken out and plunged into a bucket of cold water. The temperature of the body fell very rapidly to the normal point, that of the water rising at the same time, and consciousness returning as soon as the body was cooled. In a few minutes the rabbit was able to walk, and the next day had entirely recovered. A few moments' more exposure to the high temperature would have killed the animal: undoubtedly the consciousness was suspended by the action of the heat upon the brain, and undoubtedly it was restored by a withdrawal of that heat. A perfectly parallel series of phenomena occurs in man. A case of so-called cerebral rheumatism was reported by Dr. Wood in this journal (May 30, 1874), in which the patient was absolutely comatose, with a pulse of 160 and 170, and an axillary temperature of 108 $\frac{4}{5}$ ° Fahr., but on being placed in a full bath at 60° Fahr. exhibited distinct signs of returning consciousness in a minute and a half, and in three minutes attempted

to get out of the tub. The temperature fell several degrees in a few minutes, and gradually became normal, and the patient finally recovered.

This case in connection with the experiments upon the lower animals seems to establish with absolute certainty the truth of the third proposition.

It having been proven that excessive heat is present in fever, that it is capable of producing the disturbances of innervation and circulation, and that its withdrawal is followed by instantaneous relief of those disturbances, the conclusion is logical that excessive temperature is the cause of the other symptoms of fever; that it is the essential portion; that fever and excessive bodily temperature are synonymous.

Having arrived at a clear idea of what fever is, we are now prepared to investigate its mechanism; to determine, if possible, in what way the rise of bodily temperature is produced.

In fever, all portions of the body are usually in unison, the increased tissue-change which must be at the basis of the elevation of temperature apparently occurring everywhere throughout the system. It is plain that there are only two bonds of union between all portions of the body,—two organs or tissues which fuse, as it were, all parts of the system into one, and that any physiological or pathological process which is equally shared by all must have its origin either in the blood or in the nervous system. Is fever, then, a hæmic disorder, or is it a neurosis?

Let us pause a moment to understand clearly what we mean by fever being hæmic or neurotic. If the poison carried by the blood into all parts of the body acts upon the various tissues everywhere in such a way as to increase in them tissue-change, or if, upon entering the blood, it excites such changes in that fluid as to cause it to incite the tissues everywhere to fever, then that fever may be called with scientific strictness *hæmic*. Suppose, however, we have a fever-centre in the nervous system, and that irritation of a peripheric nerve is capable of causing fever by affecting such centre; then the fever is certainly a neurosis. Granting the existence of a "fever-centre" of this kind, the laws of life teach us that there must be poisons capable of acting upon it so as to produce a fever, which would certainly be *neurotic*, although due to a poison in the blood. With this understanding of the terms, proof is wanting at present that the fever of pyæmia, for example, is strictly hæmic; it may be due to an action of the poison upon the central nervous system. There are, however, numerous fevers in regard to whose origin there can be no doubt, as that due to the irritation of a local inflammation, and especially the so-called urethral fever, etc., where the fever is due to an irritation that effects no local nutritive change, and must, therefore, be produced through the nervous system. A phenomenon which is in itself sufficient to prove that fever is not always due to a diseased condition of the blood is the confinement of the fever in some cases to a part, especially seen in malarial disorder. The conclusions to be drawn from the clinical consideration of the subject are that in some cases fever is undoubtedly a neurosis, whilst in

other cases clinical medicine is unable to decide with certainty whether the elevation of temperature is neurotic or hæmic.

Having investigated the origin of fever from the clinical point so far as we are able, it is evident that we must supplement this study by an experimental investigation directed to discovering to what extent and in what way the nervous system does influence animal temperature.

In 1870, P. Heidenhain announced the following results obtained experimentally:

1. Irritation of a sensitive nerve causes a rise in the blood-pressure, but a fall in temperature.

2. This fall occurs in the posterior part of the body even after the circulation has been entirely cut off by forcible compression of the aorta.

In order to determine clearly the truth concerning the influence of irritation of a sensitive nerve upon temperature, Dr. Wood has performed a number of experiments upon dogs and rabbits, in which the crural and axillary nerves were exposed and subjected to galvanic irritation, while a thermometer was introduced into the peritoneal cavity.

In no case did the temperature fall whilst the current was being applied, but in nearly every case there was a perceptible rise, amounting from an eighth to a half of a degree, and probably due to the rise of blood-pressure and the violent muscular exertion caused by the pain. It certainly occurred at the period at which the blood-pressure was increased. In many experiments upon the action of irritation of a sensitive nerve upon the arterial pressure, Dr. Wood found that if any rise occurred it was immediate, and that in a very brief time after the cessation of the irritation the arterial pressure became normal. The fall of temperature, however, did not commence until after the period of disturbance of the circulation, and in most cases it was very persistent, and progressively increased for many minutes. It is therefore evidently absurd to attribute the fall of temperature to disturbance of the circulation, since at the time of the fall of temperature the circulation is not profoundly affected.

From these data the conclusion seems logically inevitable that the fall of temperature which results from the irritation of a sensitive nerve is independent of the circulation, and is due to a direct influence of the nervous system upon the heat-producing functions of the body.

If the cord of a rabbit or other small mammal be cut in the lower cervical region, the temperature at once falls; and if the air of the apartment be decidedly below the warmth of the body, this fall is permanent. If, however, the animal be thoroughly wrapped in raw cotton or in wool, and if the external temperature be not too low, the fall just spoken of is but temporary, and is succeeded by a rise of temperature which passes far beyond the normal point, so that the animal dies in a state of intense fever.

The question here presents itself, Is the first fall of temperature due to a lessened production, or to an abnormal throwing off of animal heat? The fact that after the secondary fever has been developed the temperature will again fall if the animal

be exposed to cool air, certainly shows that the body throws off heat more rapidly than normal, the dilatation of the vessels in the lungs and on the surface, and the slowly-moving blood-current, being well calculated to produce such an effect. It is probable also that there is, immediately following division of the cord, diminished heat-production as well as increased heat-evolution. But, be this as it may, facts which it would be premature to bring forward at this time prove that the fall is directly connected with vaso-motor paralysis and the derangement of the circulation.

T. Tscheschin states that in a single experiment, instead of cutting the cord, he divided the medulla oblongata at its junction with the pons, and that the rise of temperature was in this case immediate, and not preceded by a fall. This fact has been entirely confirmed experimentally by Dr. Wood, who also found that, after galvanization of a sensitive nerve in an animal in which this section of the medulla had been practised, the same rise of blood-pressure as in the normal animal took place, showing that the section had been made above the vaso-motor centres.

Dr. Wood also found that the rise of temperature followed section of the medulla at the pons in animals in which the arterial pressure had been reduced to the minimum point by free venesection, as well as in those in which the arterial pressure was very great.

That the rise of temperature was in no wise connected with the respiration was proven by the fact that it occurred in all conditions of that function. Section of the medulla at the pons therefore produces a fever, which must be due to the cutting off of a repressive force,—*i.e.*, there must be in the nervous system above this point a centre which controls the chemical movements of the body. This is in accord with well-known pathological facts, since free hemorrhage into the pons is followed by an enormous rise of temperature if the patient live a few hours. The fact that after hemorrhage in the neighborhood of the optic thalamus the temperature of the paralyzed limb is usually several degrees above that of the rest of the body for many months, indicates that this centre is in the neighborhood of that body.

If this centre exist, it is evident that irritation of a sensitive nerve after section at the border of the pons ought not to be followed by fall of temperature. In Dr. Wood's experiments the result was in agreement with this,—no fall of temperature under these circumstances following the most intense irritation of the largest trunk.

A knowledge of the existence of an inhibitory chemical centre throws a flood of light upon many hitherto inexplicable problems in clinical medicine. Thus, it has long been known that high bodily temperature may co-exist with any condition of the circulation, and as long as it was believed that the rapidity of the production of animal heat was directly dependent upon the activity of the blood-current, the co-existence of high fever and of lessened arterial action was a very strange phenomenon.

The mode of origin of an ordinary case of irritative fever now becomes evident. A boil, a pneu-

monic lung, or any local focus of irritation, sends its impulse up an afferent nerve to the inhibitory chemical centre, which is paralyzed, giving rise to the subsequent fever.

In another case the irritation may be of such a nature that the centre is excited to increased action, and the result will be, of course, universally lessened chemical movements, *i.e.*, lessened heat-production and diminished bodily temperature.

This is completely analogous to what takes place in the case of the ordinary motor nervous system; the difference being that whilst in the former instance the result is a chill or a fever, in the latter it is a spasm or a paralysis.

Because, however, fever in some cases is produced by paralysis of the inhibitory nerve-centres, it by no means follows that it is always so; indeed, it is probable that there are other methods of its causation.

There may be an accelerator, as well as a depressor, of chemical activity in the body; and it is probable that there are certain poisons which elevate bodily temperature by a direct action on the tissues, since there are certainly substances, such as alcohol and nitrite of amyl, which lessen this chemical activity after the body has been separated from the upper nerve-centres by complete division of the cord, and which must therefore act directly upon the tissues or upon the blood.

ORIGINAL COMMUNICATIONS.

ON THE TREATMENT OF NEURALGIA BY THE CONSTANT CURRENT.

BY WHARTON SINKLER, M.D.,

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IN the number of the *Philadelphia Medical Times* for July 15, 1872, I reported, together with some other cases of neuralgia, that of Mrs. P., who had suffered from neuralgia of the fifth nerve, which was relieved by galvanism. I will now give the further history of the case, and add other instances of neuralgia which have been treated by the constant current:

Mrs. P. returned to the Infirmary for Nervous Diseases* on August 26, 1872, with a renewal of her old malady. She states that she had experienced complete relief from pain from April until June 20. For several days she had been exposed greatly to wet, and had been occupied most of the day in a kitchen with a damp brick floor. On the day above mentioned she was suddenly seized, about 3 A.M., with an attack of pain in the left lower jaw, at the former seat of disease. Ever since then she has had one or more attacks of neuralgia each day. She had as many as six attacks, but occasionally a day would pass without any pain at all. For the past two weeks she has suffered more than ever, and has had almost constant pain in the jaw. Talking or eating will bring on an attack, but a draught of air against the face does not. She describes her suffering as being like a tearing apart of the jaw, and like running a knife along the bone. On the

* Hereafter, in this article, I shall, for convenience, use this title instead of the longer one.

day of admission she had had a severe paroxysm of pain, beginning about 4 o'clock A.M., and lasting about twenty minutes. Talking, however, always causes some pain, as do jars to the body. The jostling of a wagon which conveyed her to the railroad-station produced much suffering.

On admission, she was weak, for she could not take sufficient food, on account of the inconvenience in mastication; and she looked anxious and worn, and was restless. The gum of the left lower jaw was tender and swollen; the tongue coated and pasty.

She was ordered to have liquid food, and to take the emulsion of cod-liver oil and lacto-phosphate of lime. The battery was directed to be applied twice daily. For the first three or four days there was very little relief to the pain, except that for a short time after each application of galvanism she had ease.

A current from ten cells was used, one pole being placed on the nape of the neck and the other on the painful points along the jaw.

Six days after admission, the following note was made: She is decidedly better; has had no pain at night, and only two or three attacks yesterday. This morning early she had several attacks, but since the application of the battery she has had none. Her appetite is now good.

On September 11 she returned home, taking with her a sixteen-cell battery, which she had been taught to use. Her whole appearance had changed; she looked well and was cheerful. There was only an occasional slight twinge of pain.

On January 3, 1873, she wrote to say that she was very well, "and had grown portly." She had experienced several attacks of neuralgia from exposure to cold, but each time it was promptly relieved by the battery.

In this case, as in all others, we used a current so mild that it was scarcely felt; and from the first application the pain was always removed for several hours. Immediately after the sitting the tenderness of the gum had disappeared, and firm pressure caused no pain.

The direction of the current made no difference: whether it was passed from behind forwards (direct) or from before backwards (inverse), the result was the same.

Another case, in many respects similar to the preceding, is the following:

Case II.—Mary W., æt. 72, widow, applied at my clinic August 23, 1872. Has always been perfectly healthy. In March, 1872, she was exposed for some time to a cold wind, and the same afternoon violent pain began in the right side of the face, which continued all night, but lessened in severity towards morning.

For three months she suffered from this pain night and day. At times it would be a dull aching, and then there would be sharp paroxysms of pain. The point of greatest suffering appeared to be in the gum just below the right ala of the nose. Speaking or eating would generally bring on a painful spasm of the right side of the face. She had previously lost all of her teeth except four lower molars, and she now had these extracted, in the hope of relieving the pain. There was no ease from it, however; in fact, she thinks it was made worse. Finally she got somewhat better, but five weeks ago the pain came on with renewed violence.

Present state.—The pain begins at the point of emergence of the right infra-orbital nerve, and extends back along the upper jaw to the ear, and into and behind it. The whole of the alveolar process of the right jaw is tender. The suffering is continuous, but there are frequent attacks of tic douloureux. An exacerbation comes

on in the afternoon, without any chilliness, and continues throughout the night. In the early morning there is slight febrile reaction, and the pain moderates. Occasionally making firm pressure on the gum relieves the pain.

The patient suffers from indigestion after eating, and has nausea, with acid eructations. Her appetite is poor and her bowels constipated.

She has had various treatment, such as blisters behind the ear, electro-magnetism, and many local applications, but without permanent relief.

She came to my office daily for galvanic treatment for two or three weeks with fair regularity, and always experienced relief during the application and for a short time afterwards. But, having to be exposed to draughts of air and the jolting of the cars on her way home, the pain would soon return. It was therefore determined on September 16 to admit her to the hospital, and to use the galvanism twice daily. She was also ordered a hypodermic injection of morphia, gr. $\frac{1}{4}$, twice daily. The latter, however, had to be discontinued in a couple of days, on account of the nausea it occasioned.

Two days after admission it was noted that she was better, the pain not so severe, and the paroxysms of tic not so frequent.

The improvement steadily progressed, and on October 15 she was discharged, entirely relieved. The tenderness of the jaw had disappeared.

Mrs. W. remained free from pain all of the winter and summer following her discharge from the hospital. During the winter of 1873 she had an attack of neuralgia lasting two or three months, but not so severe as it had been before. A few days ago, October 31, 1874, I saw her: she stated that she had been comfortable all summer, but was suffering at the time from some pain in the jaw, caused by exposure to a cold wind a few days previous. There had been no galvanic treatment for two years.

The following case is scarcely a fair test of the efficacy of galvanism in neuralgia, as the patient had only four sittings; but I give it, as he declared he was always made worse by the application, and I wish to report the failures as well as the successful results from the use of galvanism. However, in the case of Mr. R., given below, the first two or three applications increased his pain, so that it is possible that had G. L. continued longer under treatment he might have been relieved. Niemeyer* tells us that "occasionally the pain is at first increased [by the application of galvanism], but that should not always induce us to stop the treatment."

Case III.—G. L., æt. 79, was sent to the Infirmary for Nervous Diseases by Dr. J. Ewing Mears, November 25, 1872. He first experienced an attack of neuralgia thirty-seven years ago. It came on three or four years after the death of his first wife, and was in the right jaw. It lasted twenty-three weeks, when he married again, and the pain left him.

While his second wife lived, twenty years, he had no neuralgia, but a few weeks after her death it returned again, and has not left him since. Ten years ago he had all of his teeth extracted, but it gave him no relief.

Present state.—The pain, which is constant, he experiences in both upper and lower jaw on the left side, in the branches of the inferior and posterior dental nerves, and occasionally in the infra- and supra-orbital nerves. In the latter it is very severe. The paroxysms of in-

* Text-book of Practical Medicine, vol. ii. p. 289.

tense pain come on every few minutes during the whole day. During a paroxysm the side of the face is screwed up, and he is unable to speak. There is never pain in the left side of the face.

He was ordered to have a current from ten to fifteen Callaud cells passed from the back of the neck to the painful points. After the first three applications he stated that the pain had been increased by each treatment. After the fourth he thought he was not suffering so much, but there was still considerable pain, and the attacks of tic were frequent. He did not return again, as he had determined to apply for surgical aid in the division of the nerve.

In this case an interesting point is the apparent influence that the married state had on the neuralgia. The disease made its appearance soon after the death of his first wife, ceased after his second marriage, and again began, after an interval of twenty years, almost immediately after the death of the second wife.

Case IV.—A. S., æt. 40, widow, has three children. She is healthy, and there is no evidence of syphilitic disease.

For ten or eleven years she has suffered from attacks of intercostal neuralgia, which is accompanied by pain in the supra- and infra-orbital nerves. She has had three or four attacks in the year, each lasting about two weeks. They have been growing more severe, and the last attack began three months ago. When she applied at the Infirmary for Nervous Diseases, January 17, 1873, she complained of pain in the left supra- and infra-orbital nerves and in the intercostal nerves on the same side. There was some palpitation of the heart, and a faint apex-murmur was heard. The pain never ceased entirely, but there were exacerbations. At times she felt chilly, and occasionally while the pain was severe the left side of the face flushed. There was an eczematous eruption on each side of the nose and over the malar bone. This she asserted disappeared when she had no neuralgia. During the severe paroxysms of pain she perceived a disagreeable odor in the left nostril.

Ordered galvanism daily,—the sitting to be of five minutes' duration. During the passage of the current through the head, both cheeks flushed.

After two applications the pain was no better, but the eruption was fading. On January 31 she had been steadily improving, and she then had only a slight dull pain in the upper lip. The patient entirely recovered, and has not been heard from since.

Case V.—Ellen W., colored, æt. 23, single, came to Dr. Mitchell's clinic at the Infirmary for Nervous Diseases, February 14, 1873. Was perfectly healthy until six years ago, when she began to suffer from pain in a decayed tooth. This lasted for three months, when she had the tooth extracted, but without relief to the pain. The pain seemed to be confined to the right lower jaw.

When seen, she suffered from an attack of pain about every five minutes. During the paroxysm the angles of the mouth and eye are drawn towards the ear, and all the muscles of the right side of the face twitch. She can bring on an attack by rubbing the face violently. The pain and spasm of the face are simultaneous.

The patient locates the pain in the lower jaw, and it seems to be intense, for during a paroxysm she bites the cheek until it bleeds.

There is a remarkable deposit of pigment on the right cheek, which began about three months ago. It extends from the ear to the median line of the chin over a space about one and a half inches wide. The cheek looks as if soot had been rubbed on it. Just in advance of the ear the coloration is very dark, and also

at the angle of the mouth and under the lip. There is no other change in the nutrition of the skin of the face. The girl is apparently of pure African blood. Ordered galvanism daily.

On March 7 she was much better, and the pigmentation was less marked.

March 17, she stated that the attacks were less frequent, and not so severe. The discoloration was decidedly fading.

Case VI.—J. R. R., married, merchant, æt. 45, was sent to me by Dr. S. W. Mitchell for galvanic treatment in June, 1873. Twenty years ago had a chancre, but has never had constitutional symptoms. Has had considerable anxiety about his business, but at present there is no mental strain. Four and a half years ago he had an attack of inflammatory rheumatism, and about six months later he was seized suddenly with pain in the right lower jaw. The pain came like a blow, and lasted five minutes. He was free from it for four weeks, when it began again, and lasted two months, being so severe as to keep him in bed all of that time. The pain gradually wore out, and he was then free from it for six months. A third attack came, and lasted four months, and the interval was only one month.

About February 1, 1872, an attack of neuralgia began, and did not cease until June of the same year. He then had no pain until January, 1873, when it began and lasted until he was seen by Dr. M. Since January he had not been free from the pain for one day, and the suffering had been intense.

Present state, June 28, 1873.—There are three points at which the pain is most severe: the emergence of the right infra-orbital nerve, a spot about the middle of the lower jaw, and the right half of the lower lip. There is also pain in the temple and right eyeball. In the latter it began to-day for the first time.

At the three points above mentioned there is no tenderness except during a paroxysm, when they all become sensitive to the touch, both outside and inside. There is also tenderness of the whole cheek during an attack, but it disappears with the paroxysm. There is constant dull pain in the face, but every few minutes there is an attack of violent pain which is accompanied by contraction of the muscles of the right side of the face. The mouth is drawn, and the eye tightly closed. The attack can at times be stopped by sucking the tongue against the roof of the mouth, but this sometimes fails, and nothing else shortens a paroxysm. Pressure does not relieve it.

The attack is brought on by talk, excitement, and some movements of the tongue, but not by eating or brain-work. Sight of right eye is bad. Hearing of right ear has become imperfect. There is no numbness or insensibility in the face. He suffers from indigestion and constipation.

The suffering he describes as horrible, and to alleviate it he takes morphia, gr. $\frac{1}{2}$, hypodermically, four or five times daily, but this gives him very slight relief, and he gets but two or three hours of sleep at night. Since the neuralgia first began he has lost sixty pounds in weight, and he is miserable generally.

At the suggestion of Dr. Mitchell, I began to use the galvanism twice daily. The positive pole was placed at the back of the neck, and the negative pole on the painful spots successively.

The current used was so mild as to be scarcely perceptible. The first two or three applications seemed to be followed by an increase of pain, and the patient was greatly discouraged. But on the third day the paroxysms of pain were certainly shortened and lessened in severity during the passage of the current. On the morning of the fourth day he informed me that he had slept nine hours the night previous, a thing that had not occurred for many months.

From this time improvement steadily progressed. The attacks of pain became fewer and of short duration. His nights were comfortable, and he was able to reduce greatly the quantity of morphia he took.

On July 11, after having been under treatment just two weeks, he was obliged to return to his home in the West. He took with him, however, a sixteen-cell battery, and wrote on February 7, 1874, saying that his improvement had continued. He had not become entirely free from pain, but the paroxysms were infrequent and unaccompanied by spasm of the facial muscles. He still continued to use the battery, and felt confident that he would eventually obtain entire relief.

This case is a remarkable illustration of the benefit that may be derived from galvanism in neuralgia. The pain had been atrocious, and everything had been tried for its relief without success; even division of the inferior dental nerve had been resorted to, and all the teeth on that side had been extracted.

The direction of the current made a decided difference. When the negative pole was over the foci of pain, it gave ease or checked a paroxysm; but an attack of pain was brought on by the inverse current; a strong current also increased the pain.

This patient never abandoned the use of morphia entirely, which, in the opinion of Dr. Mitchell, is essential to the success of galvanism in the treatment of such cases.

Case VII.—The notes of the following case have been kindly furnished me by Dr. Mitchell. Mrs. D., æt. 52. Neuralgia began in left side of jaw and the tongue in the winter of 1870. In the spring following she had eight teeth extracted in the lower jaw, and had ease until the next winter, when the pain returned suddenly. In the next summer she lost it, but in the fall it again appeared, and has not left her since.

Condition, April 24, 1874: The pain is in the lower jaw and left side of the tongue. At times, if exposed to cold, it is in the temple and just in front of the left ear. The pain is continuous, day and night, and is also paroxysmal. Talking and eating bring it on, and so do sweets in the mouth; salt and vinegar will also cause an attack of pain, but less soon. She has nausea at times, but no dyspepsia. Bowels constipated. The tongue feels as if scalded. When she is in pain the lips and gums are tender, but not the tongue. Eye-ground normal. An attack of pain can be checked by pressure in front of the ear. This fact—*i.e.*, that pressure at a remote point will sometimes relieve the pain in a nerve—has often been pointed out by Dr. M. in patients at the hospital.

In Cases I. and II. pressure over the painful points would always give a certain amount of relief.

Galvanism was applied to the painful points in Mrs. D.'s face on alternate days for two months, but without the slightest benefit. During this time arsenic was administered, and various other remedies were employed.

Case VIII.—J. W. B., admitted to the Infirmary for Nervous Diseases, January 26, 1874. He was 33 years of age, and married. Thirteen years ago he contracted a chancre, which was followed by secondary symptoms confined to the throat. Except an attack of intermittent fever, he has been perfectly healthy since childhood.

Four years ago, while passing his hand over the side of the face, he felt as if a thorn was sticking in the flesh at the angle of the nose. In about nine months

the pain began to run down to the angle of the mouth and back to the ear. The sensation about the ear was more of numbness than of pain. Matters continued thus, with intervals of relief for about half the time, until about four months ago, when the pain began over the right brow. The pain has been of a "flashing and darting" character, and has been worse lately.

All of the teeth in the upper jaw have been extracted, and some of the lower. No amount of pressure on the gum causes pain. There is a pustular eruption confined to the right side of the face. The eye-ground is normal, and there is no defect in hearing. The urine is normal.

The patient was ordered galvanism twice daily, and cod-liver oil.

The treatment was persevered in for two or three weeks, with relief to the pain in the supra-orbital nerve, but in the inferior dental the suffering was as great as ever. It was therefore determined to excise a piece of the inferior dental nerve. The operation was performed by Dr. T. G. Morton, one of the surgeons to the hospital, and, although there was no immediate relief to the pain, in time it was greatly mitigated. In a letter from him at his home in Sunbury, Pa., dated October 22, 1874, he says that he fears when cold weather returns the pain will be as bad as ever, for during a cold spell, a few days before he wrote, he had suffered considerably in the lower jaw. There had been no return of pain whatever in the supra-orbital. This is worthy of remark, for it was in this nerve that the pain had yielded to the galvanism.

Case IX.—O. R., æt. 35, was sent to me by Dr. Mitchell, Nov. 22, 1872. He had suffered from left supra-orbital neuralgia for several months, induced, he thought, by exposure to draughts of air. There was an eruption over the left brow, partly papular and partly pustular. When the pain was worst the eruption was most abundant. I used a galvanic current daily, placing the negative pole over the supra-orbital nerve, and the positive over one of the cervical vertebræ. Fowler's solution was also administered. Under this treatment the pain was entirely relieved, and, what is striking, the eruption disappeared with the neuralgia.

Case X. Sciatica.—Catherine A., æt. 33, married, was sent to me at the Infirmary for Nervous Diseases by Dr. W. H. H. Githens, with the following history. She had always been a strong, healthy woman, and had never had rheumatism. On June 23, Dr. G. delivered her, by the forceps, of a large child. There was considerable hemorrhage, but that was controlled, and she did well until the second day, when she was seized with violent pain in the right hip and posterior aspect of thigh. She had become chilled from exposure on the day previous, and ascribed her pain to this cause. The pain continued with great severity, shooting down the course of the sciatic as far as the knee, notwithstanding that anodyne applications were made freely.

On admission, she complains of pain, beginning in the right hip, and extending down the back of the leg to the knee. She is unable to bear any weight on the right leg, as it increases the pain, and, moreover, the limb is actually weakened. She is anæmic and weak, and her appetite is poor. Her bowels have been constipated, but she has taken medicine to relieve them. The lochia still persist. She sleeps badly and looks haggard. The pain usually grows worse in the afternoon and continues severe during the night; in the morning she has some ease. Pressure over the sciatic at any point causes pain.

She was placed in bed, ordered good food, and elix. ferri, quin. et strychn., f3i three times a day. The constant current was applied to the leg once a day. The positive pole was placed at the lower dorsal region of the spine, and the negative at various points over the

sciatic from its emergence to the popliteal space. The current from twelve to sixteen cells of a Stohrer battery was used, and the application lasted from ten to fifteen minutes.

The pain was speedily mitigated by these means, and the second night after admission she slept well. In two weeks she was allowed to get up, and could walk a few steps without much pain. She was kept quiet for some time longer, and in a few weeks was entirely well.

In sciatica, rest in bed is an important element in the treatment. In several cases treated at the hospital as out-patients it required a much longer time to effect a cure than in those patients whom we are able to keep at rest in the recumbent posture.

In addition to the cases above detailed, I could give several others; but the notes of them have been imperfect, or there has been other treatment used in addition to the electricity, which may have influenced the result.

Of these ten cases, five were completely successful, two were failures, and the remaining three were in a great measure relieved. Considering the severity of the neuralgia in every instance, the result is better, I think, than could be looked for under any other plan of treatment.

The effect of galvanism in relieving pain is very striking. Severe suffering often ceases after a few minutes' application of the current. Besides its influence on true neuralgias, many other forms of pain are cured by it; for instance, I have seen violent pain in the shoulder, in a case of hemiplegia, completely dissipated by the use of the current.

In Case V., the remarkable pigmentation of the skin at the seat of the neuralgia became greatly lessened under treatment. Dr. Anstie* refers to this action of galvanism, and states that he has seen "the constant current, in relieving facial neuralgia, not unfrequently disperse, almost instantaneously, the brown skin-pigmentation that has collected in the painful region,—i.e., near the orbit."

Electricity in the treatment of neuralgias is by no means a new agent, but it is only in the past few years that the constant current has been employed to any extent. The induced current has been used for many years, and with good results in a few cases, but often it failed entirely or aggravated the disease it was intended to cure. In the British journals a number of cases of neuralgia treated by galvanism have been reported, but in this country few if any have found their way into the medical periodicals; at any rate, I have not been able to find them, and it has therefore seemed to me well that I should detail my experience in this class of cases.

As to the method of applying galvanism, I have derived best effects from the current of a battery in which there is but little chemical action. A battery of Siemens-Halske or Callaud cells gives a current best suited for the treatment of neuralgia, but it is so bulky that it can be used only in the office of the physician. If a patient has to be treated at his own house, then we must use a portable arrangement of Smee or Bunsen cells. Some form of Stohrer's battery answers very well, but it is more of a "quan-

tity" battery than the Siemens-Halske, and causes more pain for the amount of electricity which is obtained.†

The current used should be mild,—from ten to fifteen "Callaud" or six to ten Smee cells. Niemeyer‡ speaks of active changes being produced in the skin, such as erythema and even blisters, at the points of application of the electrodes; but it is quite unnecessary that this should occur; in fact, the current need not be painful. Dr. Anstie states clearly that "only such a current is to be employed as produces a slight tingling and (on prolonged application) a slight reddening of the skin at the negative electrode."

The length of the sitting should not exceed ten or fifteen minutes; but it is of the greatest importance that the application should be repeated daily, and in many cases twice or three times a day is not too often to use the battery.

I have found that in most instances it makes but little difference whether the current be direct or inverse, and this is in accordance with the views of Dr. Anstie (*loc. cit.*), and also of Dr. Russell Reynolds.§ Eulenburg|| and Althaus¶ say that it is the positive pole which should be placed over the seat of disease, as the negative is too exciting; and Niemeyer, on the other hand, advises that in all instances the negative pole should be over the painful point. The truth seems to be that in regard to the direction of the current it varies in different individuals. In Case VI. the inverse current always increased the pain. This was frequently tested, and always with the same result.

In other cases the direct current produced pain, or it made no difference which current was used. This would seem to indicate that there was more than one variety of neuralgia. I shall not go into a discussion of the subject at this time, my object in this paper being only to point out to the profession the value of galvanism in relieving neuralgia,—a disease so terrible, and at the same time so difficult of cure.

The current should always be uninterrupted. Shocks or breaks in the current ought to be carefully avoided.

Dr. Weir Mitchell has obliged me by adding the following notes:

"Your paper on the usefulness of continuous currents in neuralgia tempts me to add some information as to the use of galvanism in cases of what I might call the neuralgic constitution,—a subject upon which, despite Anstie's admirable book, I have seen nothing said, there or elsewhere.

"This is what I mean by the neuralgic constitution. I know a few persons who are every now and

* When I speak of a "quantity battery," I mean one in which there is either a large surface of the elements or much chemical action, producing an amount of electricity capable of causing chemical decomposition, e.g., heating a wire red-hot. "Quantity is in proportion to the size of the elements; intensity is in proportion to their number" (Duchenne).

In a lecture on electricity in the number of this journal for Jan. 2, 1875, Dr. H. C. Wood, referring to "quantity" and "intensity," says (quoting Jenkin, "Electricity and Magnetism"), "these terms are remnants of an erroneous theory," and advocates the view of the same author that all galvanic currents have but one quality,—namely, strength, which depends on the internal resistance of the battery. All electricians, however, have not yet accepted this view.

† Op. cit.

‡ Clinical Uses of Electricity, p. 10.

§ Quoted by Anstie, op. cit.

¶ A Treatise on Medical Electricity.

then liable to attacks of neuralgia,—most often in the fifth nerve, sometimes in the arms, and more rarely elsewhere. I know of others who are liable to violent onslaughts of pain confined to a limited space, but which may come in almost any part of the body, but usually in the limbs. In two such cases, which were clearly not pre-ataxic neuralgia, the point of pain exhibited twitchings of near muscles, and also purpuril spots like bruise-marks. (See Report Col. Phys., 1872.)

"Some persons, and the cases are rare, exhibit only a remarkable tendency to neuralgia of the fifth nerve, and of this alone. The pain comes on after exposure to cold in winter, may attack any branch of the nerve, and fades out in summer. It does not seem, like the other forms, to be due to depressing causes, or to come, as they do mostly, in the spring. The most notable case of facial susceptibility to pain I have ever seen has been some time since dismissed cured. This lady, æt. 45, lives in the country, and four years ago was exposed to a severe cold, which froze the nose, ears, and cheeks. They were well and carefully treated, but ever since, a few minutes' exposure to cold, whether dry or moist, inevitably brought on pain in some one of the exit-points of the branches of the fifth nerve. The attack after this followed the history of facial neuralgia. At the beginning there was often a slight chill, and, after a few hours, intense flush and relief. I treated her solely by galvanic currents applied to the exit-points, and through to the back of the neck. A week's sittings brought ease. Two months' treatment enabled her to face any cold with pleasure. The cure was absolutely perfect.

"Cases of general neuralgia—that is, of pain striking this or that nerve, and rarely of long duration—are sometimes due solely to a state of excited sensorium, arising from conditions of stomach, but even in these the far-distant pathogenesis lies usually in blood-losses, and the cases, as might be expected, are commonly females. Rest in bed for a month, with attention to the state of the stomach, injections of cod-liver oil, and systematic feeding, bring these cases into a condition in which it becomes worth while to resort to galvanism. Then I determine the localities most often infested by pain, and treat these points. I cannot say that I know how the currents do good, but in all probability they act not locally alone, but also on the related groups of sensorial ganglia in the centres. At all events, they surely serve some useful purpose.

"In all neuralgias we meet with cases rebellious to galvanism, and then I am disposed to suspect that there is some grave organic cause of pain, and to think nerve-section the proper remedy. The obstinacy of traumatic neuralgias is some support to this opinion, and neuralgias of stumps, for example, are usually amenable to but one remedy,—the knife. I may add that when the case has been well studied, and the point of section correctly chosen, section is usually a success; but the surgeons rarely pay enough of attention to the physiological conditions which must be borne in mind if we expect to attain good results."

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. T. G. MORTON.

Reported by J. J. KIRKBRIDE, M.D.

PHOSPHORUS-NECROSIS OF UPPER MAXILLA—EXCISION.

H. M., aged 29, was admitted, October 28, 1874, with necrosis of the upper jaw. He was a match-dipper by profession, having been so employed since eleven years of age. His health has been moderately good until one year ago, when he suffered from a cough, with considerable debility, followed soon afterwards by toothache in the right upper jaw. Three months since, he had a tooth extracted which was much decayed, the dentist, according to his account, tearing away at the time a portion of the gum. During the next month three more teeth were removed at various intervals. Marked relief always followed these extractions, the patient returning to work the next day.

On admission, the right side of the face was much swollen and sensitive; all the teeth on that side were loose, up to the middle incisor, the gums being very boggy, swollen, painful, and perforated in many places, through which pus exuded in large quantities, while along the jaw dead bone was readily felt. The man had a full beard and moustache of considerable length, thus disproving the assertion that this appendage is a protection against the fumes of phosphorus. The patient was very anæmic, with a temperature of 97°. Lactophosphate of lime, and cod-liver oil, were ordered.

At the clinic, October 31, Dr. Morton removed all the necrosed portion of the jaw, the loosened teeth being first extracted; an incision was then made along the upper portion of the gum and roof of the mouth on the right side, and the bone separated front and back with the cutting-forceps.

But little hemorrhage followed.

Dr. Morton exhibited to the class a patient who had suffered from severe phosphorus-necrosis some years ago, contracted in the same manufactory as the former case; Dr. Hunt, in 1866, removed rather more than the entire half of the lower maxillary on the right side without making an external incision.

The supplemental jaw, which in 1867 was quite as large as the normal one, has since undergone great absorption, being one-third less than formerly; otherwise the patient has enjoyed perfect health, and has been ever since engaged in his former business as "match-dipper."

VESICAL CALCULUS OF UNUSUAL SIZE AND WEIGHT.

Dr. Morton exhibited a specimen of vesical calculus which had been removed after death by Dr. Elwell, of Vincenttown, N.J., from the bladder of a man, aged 65, who had been suffering from vesical irritation and all the symptoms of stone for twenty years previous to his death. The patient would never consent to any examination of his bladder. Death took place from exhaustion. The stone resembled a medium-sized white potato, and is of the phosphatic variety. It measures eight and three-fourths inches in its longest dimensions by six and a quarter in circumference, and weighed, immediately after its removal from the bladder, seven ounces four hundred and twenty grains.

PHOSPHORUS HYPODERMICALLY. — In Dr. H. C. Wood's wards in the Philadelphia Hospital phosphorus has been given hypodermically in a number of cases; two to three drops of the oleum phosphoratum (Prus. Pharm.) being given in eight to ten drops of glycerin. No serious local irritation was produced in any instance.

TRANSLATIONS.

HYSTERICAL ATTACK IN A MAN CURED BY COMPRESSION OF THE TESTICLES.—Dr. P. Foet relates the following case in a letter addressed to the editor of the *Gazette Hebdomadaire*: Some days previously he had been called to attend a certain M. Chartres, who, it was said, was suffering from an attack of apoplexy. Arriving at the patient's bedside, he found him lying on his back, the head turned to the left, the face of a natural color, the eyelids partly closed, the mouth open, but no frothing. The respiration was slightly accelerated and noisy. There was tympanitis. The patient appeared unconscious, and did not reply to questions. From time to time he carried his left hand to his throat, as if to rid himself of something oppressive. The right side was not paralyzed; there were no reflex movements. Sensibility was absent over the whole body. The pulse was small and rather quick.

On attempting to ascertain whether the pupil was contracted, the patient's face became flushed, the eyelids trembled continuously, the teeth chattered, the neck became swollen, and the arms and legs were seized with such violent convulsive movements that three strong men were required to hold him. The respiration became still more rapid, even anxious.

At this moment Dr. Foet compressed the patient's testicles firmly, and in less than a minute the attack had completely disappeared. There only remained a slight stupor, lasting for the space of about an hour. Dr. F. learned afterwards that the man was quite irritable; that on the day previous he had been very "contrary," and that all that day he had experienced a fixed pain in the right temple, which he had compared to that which would be caused by a nail being driven into the head. He had been subject to these pains, as well as to occasional general attacks of pain in various parts of the body. Some moments previous to his attack, he had felt great lassitude, with incessant yawning, and had lain down, thinking that they would disappear. He had had such attacks many times before, but had never lost consciousness. He remembered the events of the day, but vaguely, and replied to a question put to him by Dr. F. when, to the bystanders, he seemed entirely unconscious. Titillation of the palate and half-arches showed complete insensibility.

An antispasmodic was prescribed, and the next day the patient returned to his work. At the conclusion of his letter Dr. Foet asks the question whether the disappearance of the attack was due to the compression of the testicles in itself, or was not rather due simply to the pain which was thus caused. He inclines to the latter hypothesis.—*Gaz. Heb.*, December 11, 1874. X.

CHANGES IN THE RADIAL NERVE RESULTING FROM LEAD-POISONING.—The radial nerve of a patient who had died suddenly while under the influence of lead-palsy showed a normal appearance and volume, and, after isolation, normal medullated fibres. No trace of fatty degeneration.

After hardening in bichromate of potassium, sections stained with carmine showed on microscopic examination, instead of the usual yellow medullated filaments, which were decidedly diminished in number, certain faintly-dotted red spaces. The latter, composed of small circles arranged in groups, showed with higher powers sharp contours, and were evidently cross-sections of the filaments of which the bundle was composed.

In the centre of these circles certain dark-red points could be seen, which were probably sections of axis-cylinders, so that the sections were such as are found, for instance, in the sympathetic, which Remak, Nau-

mann, and Eichorst have shown to be regenerating nerve-filaments.

As in the cases examined by these observers, so also in the present case the trunk of the nerve showed more of these filaments than the branches.

Paralysis of the radialis by lead-poisoning would thus appear as primarily an affection of the nerve-trunk. The spinal cord and the proximal fibres of the cervical plexus were found healthy.—*C. Westphal. Centralblatt*, No. 56; from *Archiv für Psychiatrie*, etc., 1874, iv. 767, 783. X.

THERAPEUTIC NOTES.

TREATMENT OF SACCHARINE DIABETES BY PHENIC ACID (Dr. Heanjo: *Gaz. Med. de Bahia*, July, 1874).

—A celebrated professor of music of Bahia, Sr. Bispo da Igreja, fourteen years ago, while riding along a country road near that place, was struck upon the back by a falling tree, and was thrown from the saddle violently to the ground. After much suffering, and a long and careful treatment, he recovered his health so as to be able to follow his profession. Ten years after this, he began to feel ill, and placed himself under treatment. He had intense thirst, a constant desire to urinate, loss of appetite, a dry, rough skin, general debility, and total inability to perform mental work. Trommer's test repeatedly showed the presence of glucose in large quantities in the urine. For four years he was subjected to salt baths daily, and an appropriate and rational treatment, without much amelioration of his condition.

Phenic acid, as recommended by Ebstein and Müller, was then prescribed according to the following formula:

R. Acidi phenici cryst., gr. xvss;
Aq. menthæ pip.,
Aq. destillatæ, aa fʒi.—M.

Sig.—Take one-sixth part morning and evening.

The patient was permitted to select his own diet, but was cautioned against excess. In three days the polyuria and polydipsia had notably diminished, along with the amount of sugar in the urine, and the bodily and mental tone were much improved. By the continued use of the medicine, the professor gradually lost all his afflictions and began to grow fat. The last to vanish was the sugar in the urine. At the end of three months it could no longer be detected by the test. The patient still continues to take the medicine, though there is probably no longer any need to do so. He is apparently in perfect health, and is engaged in the active pursuit of his profession. W. H. WINSLOW.

CHLORAL IN SEA-SICKNESS.—Dr. Giralde (*Jour. de Thérap.*) has found that chloral is very efficient. Before crossing from Calais to Dover in rough weather he had a draught made up composed of chloral, forty-five grains; distilled water, one and a half fluidounces; gooseberry syrup, two fluidounces; French essence of peppermint, two drops. He took half of the draught as the vessel left the harbor, and arrived at Dover without having suffered in the least from sea-sickness, whilst his companions were in the usual condition of prostrate misery.

POWDER FOR CORYZA.—

R. Bismuth. subnitrat., ʒii;
Pulv. benzoini, ʒi;
Morphiæ muriat., gr. i.—M.

Div. in chart. No. ii.

One to be used as snuff in the course of the day. The insufflation of tincture of iodine and even of ammonia may be found useful in certain cases; but the latter should be used with caution, for fear of provoking epistaxis.

PHILADELPHIA
MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

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EDITORIAL.

BLUE LIGHT IN THERAPEUTICS.

SOME few years ago, General Pleasanton, of this city, created quite a stir in circles that should have judged more critically, by his experiments upon the effect of keeping animals and vegetables under blue glass. He asserted that blue light has a most marvellous effect upon all forms of life, and his views were received with a good deal of favor. They even found practical advocates in our profession, so that blue glass and blue paper made their way into hospital wards, and very great therapeutic value was even attached to them by some physicians. Recently our attention has been called to the subject by an elaborate and laudatory paper on the medical use of blue light, in one of the homœopathic journals.

It is a very curious circumstance that all the writers and experimenters believe that there is an active virtue in blue light, and that a person under blue glass gets more of this blue virtue than does a person upon whom nature's sun shines unobstructed. A moment's consideration ought, however, to teach the veriest tyro in science that the blue glass does not add anything to the sun's ray, but only takes away from it. The light beneath the blue glass is blue not because the glass has altered or colored it, but because the glass has obstructed the passage of the other rays of the spectrum, and has allowed the blue to pass

alone. A man in the hospital ward gets the same amount of blue light on him whether colored glass be there or not. To attribute active therapeutic powers to the colored light is therefore, scientifically speaking, foolishness.

We have also failed as yet to discover any good grounds for believing that light as made by the Creator contains anything deleterious to life, or that it can be improved artificially. The gentleman previously alluded to did seemingly show that the pigs raised under blue glass were finer than those of the same litter who had shared the common lot of their brethren, and did certainly raise very large crops of grapes in greenhouses into the roof of which blue glass had been placed. As we are under obligations to him for great courtesy, we are sorry that scientific candor forces us to state, after careful examination of his experimental procedures, that in them he violated the primary canons of scientific experimentation, and that his results are really of no value.

We saw the two sties, with their pigs. The "blue sty" was large and clean, airy and dry, with a few blue panes here and there in its roof; the other sty was exposed, dirty, and wet. The pigs in the "blue sty" got practically as much daylight as did the others, only the magic blue light once in a while crossed their pathways. The result, to our mind, simply showed that pigs, like their ilk even among mortals, are amenable to the beneficence of hygiene.

It is hardly worth while to say a word about the grapes, since there were no comparative results. A magnificently-situated grapery, under-drained in the most expensive and scientific manner, with a deep, rich compost-bed, in which vines of the most approved character were planted and tended by a skilful gardener, of course yielded large crops of grapes.

It was four or five years ago that we made the inspection, but, if our memory be correct, the blue lights constituted only one-third or less of the roof, so that the grape-vines were not deprived of other light.

Of course, we are open to conviction upon any scientific subject, but, if there be any truth at all in the doctrine of evolution, life must have adapted itself in the course of the last — millions of years to light as it is, and experiments to disprove this, in order to be convincing, must be conducted by those who appreciate the difficulties and necessities of scientific experimentation: certainly the burden of proof lies very heavily upon any one who attempts to improve sunlight.

CONCOURS.

THE Faculty of Rush Medical College, Chicago, has just held a concours to select a lecturer on obstetrics in the spring course. Ten gentlemen applied, and were allowed a week to prepare a lecture on assigned subjects. Four were then selected out of the ten candidates, according to the merit of the lectures, and each of these four subsequently drew a subject out of a hat and proceeded to lecture forthwith. The successful competitor was Dr. E. W. Sawyer. We have nothing but praise for any attempt to do away with the "grandmother system" of selecting medical professors, but we cannot refrain from calling attention to the fact that the "concours" does not take into sufficient account originality. The world may lose the good work the original medical thinker would have done if placed in a professorial chair, simply because his "gift of the gab" is not equal to that of his more fluent but more superficial and less original competitor.

A true system of choice would take into consideration the highest ability, that of doing original work, as well as the lower ability, that of speaking well. It seems to us that a better plan than the ordinary "concours" would be for the candidates to lay before their judges the work they have accomplished, and then proceed to lecture; the final judgment being made after a careful consideration of the whole field.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

THURSDAY, DEC. 10, 1874.

REPORT of Committee on Dr. Hodge's Specimen.—

The committee appointed to examine the specimen presented by Dr. Hodge at the meeting of the Pathological Society held September 23, 1874, report that they have carefully examined the specimen, and find that the tumor was an ovarian tumor attached to the broad ligament by inflammatory adhesions.

H. LENOX HODGE,
J. EWING MEARS,
JOHN S. PARRY.

1. *Excision of the Knee.*
2. *Cystic Disease of the Submaxillary Gland.*
3. *Cyst of the Temporal Region.*
4. *Supernumerary Toe.*

Dr. JOHN ASHHURST, Jr., presented the specimens, with the following descriptions: The parts exhibited were the condyles of the femur, the articulating surface of the tibia, the patella, and the remains of the semilunar cartilages. The specimens were exhibited in their recent state (the operation having been performed that morning), as furnishing an excellent illustration of the gelatinoid change which Brodie had described under the name of pulpy, and Swain under that of gelatiniform de-

generation. The affection was called by Barwell *strumous*, and by Athol Johnstone *scrofulous synovitis*; but Dr. A. preferred the name *gelatinous arthritis*, because, while originating in the soft tissues, the disease, if not interfered with, ultimately involved all the structures of the joint. The patient from whom the specimens on the table were derived was a boy about five years of age, who had suffered from the disease nearly two years.

Dr. JAMES TYSON inquired of Dr. Ashhurst whether the "gelatiniform degeneration" here referred to was not, more precisely speaking, an example of the so-called *mucous degeneration* of the pathologists, of which the essential feature was a conversion of the intercellular substance into a transparent mucin-containing material, while the cells themselves remained intact. The seat of the changes in the specimen presented would seem to be that especially selected for this degeneration, *i.e.*, the cartilages and bones.

Dr. ASHHURST replied that, so far as he knew, no one had investigated the minute anatomy of this disease except Mr. Barwell, who regarded the condition as essentially the same as the granulation-change met with in ordinary inflammation. The terms *gelatiniform*, *pulpy*, etc., etc., Dr. A. thought referred to the naked-eye appearances of the parts, rather than to their microscopic characters.

2. *Cystic disease of the submaxillary gland.*—The specimen consisted of a much hypertrophied submaxillary gland, exhibiting at its posterior part a large cyst which contained a whitish mucoid substance. The gland had been removed by excision twelve days previously, from a lad thirteen years old, who had been suffering from the affection between four and five months. Excision rather than simple incision was employed, as being a more rapid as well as more radical method of treatment, and one the better results of which justified the slightly greater risks by which it was attended. The operation had presented no particular difficulty, the facial artery being the only large vessel which required division, and the patient was since convalescent.

3. *Cyst of the temporal region.*—This cyst, which belonged to the *cutaneous proliferous* or so-called *sebaceous* variety, had unusually thick walls, and was readily removed, by enucleation, from a boy about ten years old.

4. *Supernumerary toe.*—This was removed from an infant of eight months. The deformity affected the left foot only, the superfluous digit growing inwards from near the base of the great toe.

Keratosis Obturans (Wreden).

Dr. CHARLES H. BURNETT presented the specimen, and read the following paper:

"I desire to call the attention of the Society to a specimen of obstructive disease of the external ear, recently described by Wreden, of St. Petersburg, and named by him *keratosis obturans*, in contradistinction to *ceruminosis obturans*, with which it has often been confounded, though differing from it very widely.

"The latter disease, as its name implies, consists of a mass of inspissated cerumen, but it is easily removed by appropriate syringing, and the ceruminous nature of the mass removed from the ear is recognized, among other features, by the rapidity with which it dissolves in water.

"*Keratosis obturans*, however, recently tabulated by Wreden as a separate and special disease of the ear, is a collection of epithelial laminæ, derived from the cutis of the external auditory meatus, of gradual accretion, causing great deafness, and very obstinate in its resistance to removal.

"Every one who has had any extended experience in removing impacted masses, usually of cerumen, from the ear, must have remarked the fact that now and then

a mass is encountered requiring a piecemeal removal by the patient use of syringe and forceps, and which, after lying a long time in water, will not dissolve as ordinary wax of the ear does. It is such exceptional masses that Wreden has investigated, and, finding that their composition is not of cerumen but of the horny elements of the cutis, he has proposed for them the name of *keratosis obturans*.

"These obstructive bodies are not confined to any age or sex.

"Wreden states that his attention was first specially called to their peculiar nature by meeting a very adherent one in the ear of a little girl. In this case he was so fully impressed with the suspicion that he was dealing with a wad of soft white paper maliciously placed in the ear by the young patient, that he accused her of the deed, and, although she denied it, he was not convinced of the truth of her denial until the microscope revealed the fact that the mass he had with great difficulty removed was composed of epithelial elements arranged in peculiar laminæ.

"Upon inspection of the ear containing such a mass as I have described, a thin layer of ordinary cerumen may be seen covering the outer surface of the plug, and thus one may gain the impression that the case is one of ordinary ceruminosis obturans or ceruminous impaction. But continued syringing, by its barren results in such cases, soon convinces the operator that the obstruction is no ordinary one.

"The case furnishing the specimen I exhibit this evening came under my care last July. The patient was a gentleman sixty years of age, suffering with intense deafness and tinnitus in the occluded ear, and, owing to the fact that the meatus was rendered abnormally tortuous by two large exostoses of the meatus, one above, the other below, it required patient and careful picking and syringing for a half-hour for eight days before all the foreign body was removed, with, at last, a restitution to normal hearing. From statements of the patient I inferred that similar though smaller and less annoying plugs had been removed from the ear, though he could not give any idea as to the length of time the present one had been forming, as the onset of deafness was almost instantaneous.

"Usually, in these cases of keratosis in the external ear, no part of the mass comes away as a coherent plug, but the mass must be broken down and removed in small pieces. In this case, however, I was fortunate enough, by the use of a solution of bicarbonate of soda (gr. x ad fʒi) in glycerin and water, to remove about half of the mass as a whole. When it was first washed out it was perfectly white, and resembled a set of layers of wet tissue-paper slightly separated from each other by the buoyant effect of the water. When pressed upon it felt quite as hard as it does now, but by this time the color of the plug has changed from white to light brown.

"Any one pressing upon this mass will perceive how readily its peculiar resiliency distinguishes it from the ordinary cerumen-plug, with its soft and greasy consistence.

"As insolubility of the removed mass is one of the distinctive features of this peculiar aural disease, I have allowed this mass to remain constantly in water and glycerin since its removal from the ear last July, and the result of the experiment may be seen at this time.

"Its resistance to solution and its leathery consistence will readily account for the difficulty one experiences in removing it from the ear.

"Wreden has not suggested any cause for the occurrence of this disease of the ear, and, although among the laminæ composing these masses he has sometimes found vegetable spores, he is not inclined to ascribe the origin of the mass to irritative presence of a fungus in the auditory canal.

"In cases where a tendency to recur is fully established, care in preventing an accumulation of the laminæ will greatly simplify the malady as well as the treatment."

Cancer of the Cæcum, and Intussusception into Large Intestine—Intramural Fibroid Tumor of the Uterus—Cystic Ovaries.

Dr. WHARTON SINKLER presented the specimens, for Drs. J. J. BLACK and STEWART, of Newcastle, Delaware. They were derived from a lady who was in her sixty-third year, and previous to September, 1873, was remarkable for her good digestive powers. After that time she was subject to flatulence, with severe attacks of pain in the abdomen, which increased in frequency as her strength failed. For three months before the close of life, vomiting was a prominent symptom, being induced by every attempt to take nourishment, and for the last ten days she was kept alive by the repeated exhibition of brandy, a large portion of which was rejected.

She died October 18, 1874.

The post-mortem examination was made the following day by Dr. Black, in presence of Drs. Porter and Bush, of Wilmington, and Dr. Stewart, of Newcastle.

The specimen of bowel included the large intestine from the commencement of the colon. Dr. Black wrote that the first part of the transverse colon appeared to have "swallowed" the caput coli, the appendix vermiformis and commencement of the ileum being also carried in, while the cæcum appeared to be a mass of cancer. On opening the first part of the transverse colon, this mass seemed to lie within it, mucous surface to mucous surface, and peritoneal to peritoneal.

The *mesentery* and *omentum* were full of shot-like bodies, and the *duodenum* up to the pylorus was very much thickened, and contained the same deposit almost blocking it.

The *kidneys* were slightly granular; the *liver* of natural size,—smooth, but hardened in texture, of light-brown color, and somewhat fatty. The *uterus* contained the intra-mural uterine fibroid forward, which was the seat of a calcareous degeneration. The *right ovary* contained a cyst as large as an orange, filled with fluid; the left, a similar smaller cyst.

The specimens were referred to the Committee on Morbid Growths.

Clot in Left Corpus Striatum.

Dr. WILLIAM DARRACH presented the specimen, derived from a male patient aged 53 years, height five feet eight inches, stout, of sanguineous temperament and of intemperate habits, but always able to walk.

On November 28 he had an attack of apoplexy, which produced paralysis of the right arm; he was unconscious, breathed heavily, and cold perspiration stood over the face; his nose was cold, and back of the head hot; pupils contracted; no strabismus. Pulse very feeble. Ten ounces of blood were taken by cups from the occipital region. The pulse came up after the bleeding, and consciousness was restored several hours after. The following morning he was able to swallow, and talked rationally, and the right arm was raised to his head.

November 30, 4 P.M.—Unconsciousness again returned, with all the other symptoms. Cups were again resorted to, and, after much suction, the blood flowed. Eight ounces were again taken. The following morning the consciousness returned, and he was enabled to take brandy and beef-tea as before.

December 1, P.M.—The congestion again returned, with the former symptoms. He was again cupped, with great difficulty, as the blood was very thick, but he was again relieved.

On December 2, A.M., he was unconscious; became worse in the afternoon, and the *left arm* also became

paralyzed, but there was no paralysis of the lower extremities. He passed water with great force. At this stage it was not thought advisable to renew the cups, and death followed after midnight.

Post-mortem.—*Heart.*—Right ventricle covered with fat. Left ventricle quite firm. Aorta showed an atheromatous condition.

Liver.—Fatty degeneration manifest.

Brain.—Sinuses engorged with blood. Pia mater cloudy and oedematous.

Left lateral ventricle contained a very large clot in the corpus striatum.

In the right none was perceptible, although there had been paralysis of the left arm the last day of his life.

The arteries of the base of the brain were markedly atheromatous.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

JANUARY 4, 1875.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

DR. J. GIBBONS HUNT made a very interesting verbal communication upon the subject of *amplifiers for the microscope*, in the course of which he remarked that from the time of the first observation by the aid of more than two convex lenses, an almost constant effort had been made by opticians to fit in the best intermediate glasses, and yet further improvement in this respect was confidently to be looked for. The amplifier which he had upon the table consisted of a concavo-convex lens, with its concave side turned towards the eye, and so placed within the body of the microscope as to stand at a considerable distance from the objective. This adjustment of position was best accomplished by having the amplifier screwed to the end of a tube arranged with rack-work in such a manner as to traverse six or eight inches, because we could thus compensate for a want of complete correction in the objectives employed.

The advantages obtained by using an amplifier were, in the first place, gain in magnifying power, as could be seen in his microscope upon the table, when with an amplification of only 1800 diameters, afforded by a $\frac{1}{10}$ of an inch objective, he had on exhibition the *Navicula angulatum* resolved into dots all over the field, which was apparently more than sixteen inches across. By the aid of an amplifier we also gain a greater focal distance, and an increase of flatness of field.

Amplifiers have been employed in telescopes for the past fifty years, but ten or twelve years ago they were only adapted to microscopes, in this city at least, by one or two amateurs. Subsequently, Mr. Tolles, of Boston, saw them in use here, and on his return home made one, apparently with gratifying success, as he has since kept them in stock. Some few years since, Mr. Dickinson, of New York, wrote a paper upon amplifiers, claiming that by their aid he could obtain a power of 100,000 diameters; but objects thus magnified are visible only as dim shadows, similar to those shown by the solar microscope, quite unfit for data in scientific work. Such amplification, however, may be employed upon diatoms, the resolution of which does not require definition.

Dr. J. G. RICHARDSON inquired of Dr. Hunt whether, in his opinion, the $\frac{1}{10}$ objective associated with his amplifier, as he had it upon the table, and eye-pieced so as to give a power of 800 diameters, was equal to his Powell and Leland's $\frac{1}{18}$ immersion lens, combined with the "A" eye-piece.

Dr. HUNT replied that on histological work the

results were not quite so good, but on *Pleurosigma angulatum* he considered them fully equal. The combination of amplifier and objective which he used was, however, a merely accidental one, so that a skilful optician would probably be able to arrange the lenses more efficiently, and thereby enable microscopists to obtain this greater amplification at a much lower cost, and yet with definition good enough for scientific work. Mr. Pigott's aplanatic searcher appeared to be a modification of the amplifier, but had proved so unsatisfactory in his hands that he had entirely laid it aside.

Dr. HUNT also exhibited a beautiful specimen of the *Protococcus nivalis*, or Red Snow, which he believed had been discovered for the first time within the United States, by Mr. Harkness, of California, who found it growing upon the Sierra Nevada Mountains. For a long time it was a matter of dispute whether this organism belonged to the animal or the vegetable kingdom; but from observations made upon specimens brought from the polar regions by Captain Parry in 1815, and which grew in bottles of snow, its vegetable nature had been demonstrated. In the growing stage, this plant is of a green color, and it is only the resting spores which present the brilliant red hue from which it derives its name. Dr. Hunt stated that on examining portions of the *Protococcus nivalis* under the micro-spectroscope he had found that its coloring-matter entirely blotted out the violet end of the spectrum, leaving the red, yellow, and orange untouched.

Dr. J. H. MCQUILLEN showed a specimen of muscular fibre from the sheep, which, after the simple method of preparation of allowing it to remain between two of his own teeth for five hours, he had placed in glycerin and teased out with mounted needles, thus obtaining a magnificent view of the ultimate fibrillæ of the muscle.

Dr. J. G. RICHARDSON exhibited a fine specimen of a vertical section from the mucous membrane of the tongue of a calf mounted in balsam, which at his urgent request had been loaned to him from the Army Medical Museum. He desired to call the attention of members to the fact that each individual epithelial cell, throughout almost the whole thickness of the membrane, displayed its outline and nucleus with perfect distinctness, and that, therefore, the statement made when balsam preparations were last under discussion, that they showed hardly anything, was inaccurate.

Dr. J. G. HUNT exhibited a similar specimen of his own, mounted in glycerin, and remarked that, when thus prepared, the epithelial cells were displayed, not shrunken, *but of their full size*, and that those important elements, the connective-tissue fibres, were clearly visible, instead of being lost to view as in the balsam preparation.

Dr. RICHARDSON observed that even if the *fresh* glycerin preparations exhibited these delicate fibres more plainly, yet the specimen preserved in balsam displayed the muscular-fibre cells with far greater distinctness, and the absolute permanence of objects mounted by the balsam method constituted one of its most important recommendations.

Dr. H. C. WOOD, Jr., stated that the glycerin preparation appeared to be superior to that mounted in balsam, and moved that in order to settle this question, about which there had been so much dispute, these specimens should be referred to a committee composed of Drs. J. H. McQuillen and James Tyson, for examination and report.

Dr. J. G. HUNT exhibited an exquisite specimen of the liver of a common fly, showing with remarkable clearness the arrangement of the hepatic cells and ducts, and stated that he proposed mounting a series of preparations displaying the structure of the liver from its simplest form in the articulata up to its most complex arrangement in the human organism.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE UPON ECZEMA, INCLUDING ITS LICHENOUS AND IMPETIGINOUS FORMS. By DR. MCCALL ANDERSON, Professor of Clinical Medicine in the University of Glasgow, Physician to the Royal Infirmary, to the Dispensary for Skin Diseases, and to the Cutaneous Wards of the Western Infirmary, etc. Glasgow. Third Edition, with Illustrations. Philadelphia, Lindsay & Blakiston, 1875.

The contributions to dermatology which Dr. Anderson has given to the profession during the last ten years, although by no means voluminous, are of such a character as to be appreciated and valued by all who have occasion to study this class of diseases. The treatise upon eczema, of which we now have a third edition, was the first of a promised series of monographs upon the various diseases of the skin which it was the intention of the author to write, but which, unfortunately, have never been completed beyond "Diseases of Parasitic Origin," and "Psoriasis." His work upon Eczema is, without question, the most complete, satisfactory, and practical exposition of this disease which we possess, affording a clearer insight into the subject than is to be obtained from any other volume. The disease is one which has to be observed and studied in its entirety in order to comprehend it thoroughly, and it is precisely in this particular that Dr. Anderson succeeds so admirably, presenting, as he does, in his essay, a complete picture of this protean affection. Space forbids entering into the subject matter of the book, but we take great pleasure in commending it to all those who desire to obtain a knowledge of the disease and its proper treatment. It may be added that this latter subject, the treatment, as given by the author, will be found to be especially valuable to American readers, inasmuch as the views expressed coincide so entirely with the experience of certain institutions in this country where many examples of this disease annually receive care. L. A. D.

OUTLINES OF THE SCIENCE AND PRACTICE OF MEDICINE. By WILLIAM AITKEN, M.D., F.R.S., Professor of Pathology in the Army Medical School, Corresponding Member of the Royal Imperial Society of Physicians of Vienna, etc., etc. London, Charles Griffin & Co.; Philadelphia, J. B. Lippincott & Co., 1874. Pp. 593.

In taking up this handsome volume, two important questions immediately suggest themselves,—viz., first, are not such abstracts unworthy of countenance and support, on account of their tendency to make superficial students of medicine? and secondly, admitting, for the sake of argument, that a well-arranged epitome of practical medicine is needed, have we such an example of condensation in the pages before us? We confess to a strong feeling of anxiety on the score of the abstract value of such guide, originating in the well-known circumstance that medical students are only too apt to seize with avidity any excuse for neglecting that thoroughness, or "Grundlichkeit," which should be a *sine qua non* to their entrance into our profession. Nevertheless, if, by amplifying and elevating the standard of final examinations, the use of this book could be restricted as prescribed by its author, namely, to the duty of serving as "a clinical guide and companion [to the student] in the wards of the hospital, and an aid to his memory in the lecture-room," we believe benefit, instead of injury, would arise from its employment. We would, however, indelibly impress upon the minds of all the mournful fact that dark shades to these outlines will be filled in by any and every novice who dares to take into his hands the issues of life and death

without more complete preparation than the work under consideration would alone enable him to obtain. But, granting that under proper restrictions compendiums are not unmitigated evils, we can honestly recommend this one as an excellent epitome of the essentials of the science and practice of medicine, admirably calculated to lead a true student to more thorough investigations of the subjects whereof it treats. The arrangement and general plan of the book are similar to those adopted in the author's larger work, as well as others of its class. We notice, however, some important improvements, among which the systematic prominence given in the opening chapter (all too brief as they are) to *general*, and, later in the book, to *special* pathology, as well as the method of providing careful guides to the clinical investigation and diagnosis of diseases affecting the various systems and groups of organs, are worthy of especial praise.

Of course, in such an extended work the author has not always succeeded in sifting out the most important facts, and occasionally his process of selection has been carried to an injurious extent. For example, we think that even first-course students should be taught on page 545 that oxalate of lime occurs as a urinary sediment, especially when the existence of oxaluria is recognized on page 548; and we can imagine the bewilderment of a tyro who is instructed on page 541 to administer a quarter of a grain of "morphine" as the equivalent of half a grain of solid opium or twelve drops of laudanum every hour for the relief of a "gall-stone colic." The typographical appearance is good, but the proof-reading seems to have been less careful than is customary in books printed in America, numerous misprints being overlooked, as, for instance, "aconium" for "aconitum" on page 96, and the ludicrous blunder of "diet" for "meal" on page 550. J. G. R.

GLEANINGS FROM OUR EXCHANGES.

ESMARCH'S BLOODLESS METHOD (*New York Medical Journal*, January, 1875).—Dr. J. B. Sands reports the results of one hundred and forty-three bloodless operations performed at the principal New York hospitals.

There were sixty-three amputations, excluding those of the fingers and toes. Of these, forty-four were primary, for injury, and nineteen secondary, or for disease. Of the primary amputations, ten cases, or 22.7 per cent., terminated fatally,—the causes of death being the following: pyæmia, four; exhaustion or shock, three; spreading gangrene, one; erysipelas, one; hemorrhage, one.

Of the cases fatal from pyæmia, one patient had the disease at the time of the operation.

Of eight cases of primary amputation of the thigh, two cases, or 25 per cent., ended fatally.

Of eleven cases of primary amputation of the leg, three cases, or 27.3 per cent., were fatal.

Secondary amputations, nineteen cases, give a mortality of 21 per cent. The causes of death are stated as follows: tetanus (existing at time of operation), one; exhaustion, one; phthisis, one; pyæmia, one.

Out of fourteen cases of excision of the joints, only one proved fatal; the cause of death being pyæmia. The list included two more deaths, one following an operation for necrosis,—the only fatal case out of thirty-six,—and the other an operation for the ligation of the ulnar artery, performed for a wound near the wrist.

CASE OF NORMAL OVARIOTOMY (*New York Medical Journal*, January, 1875).—Dr. T. T. Sabine reports the case of a female, æt. 25, who was perfectly well up to eight years ago, at which time, while menstruating, she took a cold bath, which was followed by cessation of

the menstrual flow, and a very severe attack of neuralgic pain in the left iliac fossa and left limb, lasting seven weeks, and resembling, only in a much milder form, the pain which she has since suffered. The treatment was by leeches, wet cups, etc.

After this the catamenia became extremely painful, and dysmenorrhœa was constant for four years. At this time (four years ago) the dysmenorrhœa became more intense, and was accompanied by severe neuralgic pain, limited to the region of the left ovary. Patient remained in this condition until eighteen months ago, when there was a sudden increase in the severity of the attacks, probably due to frequent exposure to wet and cold. The catamenia ceased for three months, and corresponding to the menstrual periods there were attacks of intense ovarian pain, lasting about ten days. The treatment at this time was by leeches and ice locally, and the internal administration of morphine. After this time she was unable, on account of the severe pain in the region of the left ovary, to bear the weight of her body on the left limb, which was flexed and laid across the right as in *matus coxarius*.

Ovariectomy was performed, as her strength and health began to fail in consequence of repeated attacks of pain.

The left ovary was removed, and was of natural size, the stroma and capsule appearing normal on section. The relief afforded was complete, and she entirely recovered.

PARACENTESIS PERICARDII (*The Lancet*, December 19, 1874).—Mr. T. H. Bartlett reports the case of a young man suffering from acute rheumatism, in whom symptoms of pericarditis came on and rapidly increased in severity. The pulse and breathing were rapid and feeble, and the dyspnœa was urgent.

Cardiac dullness extended to one inch to the right of the sternum and to the upper border of the first rib above, though here the dullness was not complete. The limit of the dullness on the left side was uncertain, owing to effusion in the chest. On auscultation, the heart-sounds were very feeble and distant; no friction-sound. There was a faint mitral bruit. The character of the heart-sounds was not affected by posture. The impulse of the heart could not be felt otherwise than as an ill-defined movement of the chest-wall at the region of the apex, spreading over a space the size of a crown-piece.

It was decided to perform aspiration, and a No. 2 aspirator-needle was passed in the intercostal space between the fourth and fifth ribs, two inches to the left of the central line of the sternum. The needle was used as an exhausted needle; and as soon as the pericardium was penetrated, as shown by fluid freely passing into the aspirator, the point of the needle was pressed up against the chest-wall as closely as possible. The fluid flowed freely to fourteen ounces, and then stopped flowing. It was deeply tinged with blood, and deposited speedily a scanty coagulum, and subsequently a layer of blood-débris. The supernatant fluid, still somewhat tinged, had a specific gravity of 1024.

The patient showed immediate relief, and improved steadily until recovery was complete.

ANEURISM.—In his recent lectures on aneurism Mr. Holmes arrived at the following conclusions:

1. That rapidly-growing aneurisms with a thin or imperfect sac are best treated by immediate ligature, especially when caused by recent violence; and that the success of compression is doubtful in aneurisms growing towards the knee-joint, and in all others which advance rapidly.

2. That the Hunterian ligature has been about twice as successful in modern hospital practice in England as the results of the accepted statistics show it to have been.

3. That the results of the compression treatment in the same hospital have given as yet about the same average as those of the ligature, but that these results might be much improved by a more careful employment of the method.

4. That too long persistence in compression is to be deprecated, as being likely to interfere with the success of the ligature.

5. That flexion is often successful when used so as not to distress the patient, and is worthy of a trial in all cases in which it stops or materially checks the pulsation, but should not be too long persisted in when it is not at once beneficial.

6. That we have no evidence showing the utility of, or the need for, the less usual forms of treatment, such as galvanism, coagulating injections, manipulation, temporary ligature, or the introduction of foreign bodies.—*New York Medical Journal*, January, 1875.

ACIDULATED GARGLES IN TYPHOID FEVER.—M. A. Netter, alluding to the buccal element in typhoid fever, and to the beneficial influence of frequently-repeated acidulated gargles, draws the following conclusions:

1. Call the attention of the patients to the bad odor of their mouth, and inform them that not only in it, but also in the nose, there is something being secreted which poisons the whole system.

2. Place at their disposition an unlimited quantity of a solution containing two hundred grammes of decoction of barley, thirty grammes of honey, and twenty-five grammes of vinegar. Let them gargle and rinse the mouth with this frequently, and also snuff it into both nostrils. When they have commenced with this, it will be found so agreeable that large quantities will be consumed.—*New York Medical Journal*, January, 1875.

NOTES AND QUERIES.

SATURDAY, January 16, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

MR. EDITOR,—As one of the "medical members" of the Board of Managers of the Episcopal Hospital alluded to in your complimentary notice, week before last, of certain supposed action of that Board in answer to an appeal from a majority of the Dispensary Staff, in relation to an alleged overcrowding of the "daily morning clinics," and to a proposed establishment of afternoon "special clinics," I beg leave to submit a few remarks which were written too late for this week's *Times*.

I wish to suggest, as an old contributor to the Hospital,—not as a Manager, since I do not speak for my associates,—that a general hospital which is still incomplete in its construction and insufficient in pecuniary resources, and in which the out-patient department is already thought to be disproportionately burdensome in cost, is hardly in condition to be used in hobby-riding, whether in the dispensary or wards. Least of all is it prepared for an expensive and difficult experiment in the department which is said to be already over-run and costing more than the Hospital can now afford.

Because a few enterprising young men, after not more than twelve months' trial of the service as it is, have come to the conclusion that the "general clinic" of the morning is too large for them to attend to properly, and now "therefore" propose to be converted into "specialists" to attend to selected cases in the afternoon, are the Managers to be driven by the fear of—well, anybody's "extraordinary" wonderment at their "Philadelphia prejudice," into sacrificing all other considerations to a hue and cry for "specialism"?

Supposing—what has not yet been "demonstrated," either by figures or by assertions—that the general clinics were so injuriously overcrowded, is there no better way to meet the emergency than to plunge into all the perplexities, inconveniences, increased expenditure, at least temporary confusion, and greater responsibility throughout, of an attempt to provide for and invite the attendance of additional crowds of special cases in the afternoon, in order simply to lessen the excessive crowd of miscellaneous cases in the morning? If the "special afternoon clinics" were to be "allowed," as you express it, think you that "Philadelphia

conservatism" should "allow" the perversion of the still restricted funds of the Hospital—hitherto intended for what, with a clear view of all that *out-patient specialism* can effect and pretend to, I do not hesitate to regard as a much higher and broader purpose—in an undertaking which could not be saved, by the best influences now within our reach, from proving much more pretentious than practically useful for years to come? A good deal of difference of opinion very naturally exists among the members of the dispensary staff as to the need and policy of this specialist arrangement. Although six out of eight agree as to the overcrowding, some protest against the whole idea of change, and others are unsettled, if not indifferent, as to the kind and form of remedy. There is nothing to show that any of these would be willing to give up his hold on any class of cases in the morning because another set of prescribers were expected to attend to such cases in the afternoon. It would be hardly fair to advertise that the doctors, each in turn, were to treat all the cases without discrimination before dinner, but that after dinner one was to claim superior skill with certain cases, and to monopolize their treatment to the exclusion of his colleagues. Nor would it be much more encouraging to the patients to be informed that they were to go to one doctor only, and avoid the others, and to choose the right one, too, if it was after dinner, but that before dinner they were not even to be allowed a Hobson's choice! In a word, if we must have "specialism," we must first catch the specialists. No stickler for specialism could agree to any harlequin arrangement which would make the generalissimo of the morning a specialissimo of the afternoon. In fact, Mr. Reformer, there are too many lions in the way!

I have just been reading some remarks of Mr. Erichsen in his recent admirable lectures on "Hospitalism," which seem so apropos that I have taken the trouble to copy them. They are in Lecture IV. ("On the Prevention of Hospitalism"), pp. 100 and 101 of the little book. He says,—

"Thirty years ago the out-patient department was insignificant in comparison to what it now is. Dispensaries then did the work that hospitals now undertake in this respect. Not only are there the usual general medical and surgical out-patients, but very commonly out-patient arrangements are made for those affected by a variety of special diseases. Not only has the augmentation in the number of out-patients become so great as to be a source of demoralization to the public at large, of loss and injustice to the great mass of medical practitioners, of wasteful expenditure and of serious embarrassment to hospitals, but the accumulation of these crowds of diseased, often of infectious people, in the entrance-halls and 'out-patient and casualty' rooms of hospitals, has become a source of serious unhealthiness to the inmates of these institutions."

Practical study of these matters, in different places during more than thirty years, enables me to agree fully with all of this from actual experience, and with a good deal more that might be quoted with advantage. There are many reasons why a large dispensary or out-patient service is not desirable in a general hospital, although a limited one is not easily avoided, and may be very useful. Still more objectionable is it, as Mr. Erichsen very clearly shows, when allowed to be conducted within the hospital building. The greater the size the greater the objection, as a matter of course. The Episcopal Hospital plan of construction includes a separate out-patient building, to be placed as far on the one side from the corresponding wing as the laundry and dead-house are on the other. The present arrangements are altogether temporary; and so ought to be the much more commodious and convenient rooms in the basement of the nearly completed second wing.

"Specialism," at least in the multiple and attenuated form now struggling into notice, was very little contemplated in our original hospital design. I suspect there will be ample time for its full consideration before the proper out-patient building is constructed. In the mean time, I trust the *Philadelphia Medical Times* may possess its soul in patience, and prevail upon its friends to wait more quietly. Some of them, perhaps, may be less dazzled in the lapse of years—say the "two or three generations" mentioned—with the view of the "special" pinnacles on which they are now so anxious to be perched.

We hear much about old-fogyism in all "progressive" movements. Is it not well to remember that *young-fogyism* is the rampant evil?—that it is at least as rife on these occasions, and much more apt to cost a great deal more in work and means than it comes to? Allow me just to hint, in conclusion, that although specialism is far from being a "new" thing in any sense among us, it still is, unhappily, a very crude thing in many places, and in many of its forms and aspects. If you wish to see some of these in their true light, please put on a clearer pair of spectacles. If the glasses must be colored, do let the tint be neutral. Above all things, don't let them magnify beyond ordinary comprehension when they are directed towards a mare's nest; and let the field of vision be large enough to take in a view of the question which may, at least, be worth a practical examination.

Respectfully,
EDWARD HARTSHORNE.

[WHEN we printed Dr. Knight's note last week, we supposed that he was correctly informed as to the matter concerning which he was writing, and accordingly acquiesced in his statement that we "had no case at all." Further inquiry has revealed the fact that we were right in our first position: the petition *did* come from the dispensary staff, one or more meetings of which were held about the matter, as stated in the notices issued, the staff being unanimous with a single exception. We therefore fall back in good order upon our original position. In regard to Dr. Hartshorne's letter, he greatly misunderstands us if he believed we had the slightest intent to "drive" him or the Board. We do not waste effort in attempting impossibilities. If he will re-read our editorial paragraph, he will see that it was written concerning *un fait accompli*, simply bringing it forward as an example of the opposition to specialism which certainly does prevail largely in the minds of the older members of the profession in this city. It is impossible to create skilful specialists without offering dispensary or hospital opportunities for them to perfect themselves. You will never get the loaf before you sow the wheat. To attempt to "catch specialists" before you have specialism is as foolish as to look for chickens where there have been no eggs. If specialism is "crude" among us, it is simply because the dispensaries and hospitals will not allow special departments in which specialists may be trained. If we have so much "rampant young-fogyism," certainly our crudeness is not because we are wanting in those of spirit and power to work out from this crudeness. We do not think this letter of Dr. Hartshorne's will convince any one that if he wanted special clinics there would be any insuperable difficulties in the way. If he really desired to go up to the palace called Beautiful, like Christian, he would find the "many lions" very harmless animals.—Editor P. M. T.]

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In the last issue of the *Times* your Japan correspondent portrays what he supposes to be an undescribed form of disease, which he designates "Japanese Leprosy." He states that he has never seen it "described in any medical work or journal," leading one to suppose that the symptoms are those of some new variety. The question of interest in the case is simply whether the leprosy of Japan is different from that of any other country. The symptoms detailed in the description of the cases cited are those of the well-known anæsthetic variety of the disease, as it is encountered in many portions of the globe, and certainly present nothing peculiar or new. If, however, there are other symptoms, not common to the leprosy of India and the East generally, which the leprosy of Japan offers, it will be of interest to have the same fully recorded, that our knowledge of this fearful malady may be thereby enriched.

Very respectfully yours,

L. A. DUHRING.

1416 SPRUCE STREET, January 19, 1875.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A SPECIAL meeting of the Society will be held Monday, February 1, 1875, at 8 o'clock P.M., at the Hall of the College of Physicians.

Dr. Washington L. Atlee will deliver his retiring address as President. Subject: A Retrospect of the Struggles and Triumph of Ovariotomy in Philadelphia.

The medical profession in the city are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 19, 1875, TO JANUARY 25, 1875, INCLUSIVE.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—Temporarily assigned at Fort Vancouver, until the season will admit his joining his proper station,—Fort Colville, W. T. S. O. 5, Department of the Columbia, January 11, 1875.

KINSMAN, J. H., ASSISTANT-SURGEON.—Assigned to duty at Fort Seward, D. T., until further orders. S. O. 9, Department of Dakota, January 16, 1875.

HEIZMANN, C. L., ASSISTANT-SURGEON.—Granted leave of absence for six months, with permission to go beyond sea. S. O. 13, A.G.O., January 20, 1875.

WILSON, A. D., ASSISTANT-SURGEON.—Assigned to duty at Camp McDowell, Arizona Territory. S. O. 2, Department of Arizona, January 7, 1875.

SKINNER, J. O., ASSISTANT-SURGEON.—Leave of absence extended for one month, with permission to apply to the Headquarters of the Army for a further extension of three months. S. O. 7, Military Division of the Pacific, January 12, 1875.

SATURDAY, FEBRUARY 6, 1875.

ORIGINAL COMMUNICATIONS.

THE THERAPEUTICS OF FUNCTIONAL HEADACHE.

BY ALLAN McLANE HAMILTON, M.D.,

Lecturer upon Nervous Diseases at the Long Island College Hospital, etc.

ALL remedies for the alleviation of the several varieties of this condition may be included under the following heads :

- | | |
|-----------------|--|
| I. INTERNAL. | <ul style="list-style-type: none"> Cerebral anæmiants. “ stimulants. Those diminishing reflex irritation. “ “ remote local congestion. Cardiac sedatives. Alteratives. <ul style="list-style-type: none"> Malarial. Syphilitic. Gouty. Rheumatic. |
| II. LOCAL. | <ul style="list-style-type: none"> Peripheral irritants. “ anæsthesiants. “ revulsives. |
| III. GALVANISM. | |

The headaches dependent upon anæmia of the brain result usually from nervous exhaustion. These are the headaches of brain-workers, or may also follow unusual physical fatigue. The distressing persistency of the headache of nervous prostration is the characteristic feature. It is the most protean of all forms, as it may be a close counterfeit of neuralgia, or, on the other hand, may be dull and subacute. These patients are usually anæmic and much reduced. The headaches are associated with vertigo, and oftentimes nausea. There is usually vomiting, and sometimes syncope. The mental powers are exhausted, and the patient who suffers in this way usually awakes unrefreshed by sleep, with dull heavy pains and a sense of fatigue. There is little disposition to use the mind; the pulse is small and feeble, and there is sometimes a tendency to passive cerebral congestion. The skin is cool during the attack, and the surface may even be moist.

Many of my patients who suffer in this way are women, and the headache is the most distressing when the patients awaken. The use of a cup of tea or coffee is excellent at this time, and I have lately found that cocoa given in the form of a fluid extract is of very great benefit. Messrs. Hazard and Caswell have made for me a fluid extract which is quite concentrated. A drachm or two of this is the dose. The following prescription is a favorite of mine for these headaches :

℞ Strychniæ sulph., gr. i;
Acidi phosph. dil.,
Tr. ferri chlor., āā ℥vi;
Aquæ camphoræ, ad ℥iv.—M.

Sig.—A teaspoonful after eating.

The use of diffusible stimulants is in order. We may give the patient the aromatic spirits of ammonia and sherry wine several times a day with good results. Muriate of ammonia is an invaluable remedy in these headaches, particularly in hemicrania; it should be given in very large doses—from ten grains to thirty—every hour until relief is obtained.

A form of headache spoken of as *hyperæsthetic* by Hanfield Jones demands opposite treatment, for the administration of stimulants aggravates it greatly. These are the cases where there are redness of the face, tense carotids, injected conjunctivæ, and heat of skin. The patient is very restless, and the mental faculties are confused. These patients have cold hands and feet during the paroxysms, as a rule. There is imperfect nervous stimulation of the heart, and the cerebral vaso-motors are subject to paresis. These patients find it difficult to sleep; there is tossing at night, and the mind is possessed by a myriad of thoughts that chase each other through the brain. The first order of remedies in my table are of value here, and the bromides are the best of them. We may give this prescription and hope for good results, sometimes very immediate ones :

℞ Sodii bromidi, ℥i;
Fld. ext. ergotæ, ℥iss;
Aquæ camphoræ, ad ℥iv.—M.

Sig.—A teaspoonful every three hours, or two teaspoonfuls at night.

I believe the sodic salt to be the most efficacious of all, and the most reliable. Bromide of calcium is next in order, I am convinced, after having given it an extended trial.

In these headaches cardiac sedatives are of incalculable benefit. Tincture of aconite and veratrum viride will often produce happy results. The continued use of digitalis, combined with zinc, the latter in the form of the oxide, does much to change the character of the circulation.

For the headaches of inebriety I have used since the year 1871 the monobromate of camphor. The results of my experiments I published in the *New York Medical Journal* of August of that year. I am sorry to see that this excellent remedy has fallen into disuse, for it seems to possess hypnotic properties peculiar to itself.

Bourneville, of Paris, has recently called attention to its physiological effects, and I trust its use will be more extended, it having received favor at the hands of this distinguished gentleman. Local depletion, and, in some cases, general depletion, are necessary. Leeches and cupping relieve the gorged sinuses at the base of the skull. A very common class of headaches are those dependent upon reflex causes. They may be called the *inhibitory* headaches. They go hand in hand with disturbance of digestion, irregularities in the uterine functions, and with other conditions dependent upon eccentric irritations transmitted to the central nervous axis. These headaches partake of all varieties: we may have the well-known sick-headache, the headache of dysmenorrhœa, or that associated with an irritable uterus. Of course, our diagnosis will point out the cause very quickly; but oftentimes there are points of irritation we may overlook. Hemorrhoids may often produce headache, associated with great restlessness and fatigue. Its seat is usually in the frontal region, and it comes on very suddenly.

The uterus will account for two-thirds of the headaches among women; and one of my patients now under treatment suffers with a common form

all have met with undoubtedly. Her uterus is retroverted: mechanical pressure is made upon the rectum to such a degree that the walls of that gut are in contact nearly all the time. A headache is the result, which is persistent and very prostrating. She suffers constantly from constipation, and before I saw her was often in such extremities from retained *fæces* that she would pass an ivory paper-cutter up the rectum and press the uterus forward. After working in this manner for some time, and using a syringe, she would have an unsatisfactory, ribbon-like, and greatly attenuated stool, and the headache would disappear for several days. These cases are more familiar to the gynecologist than to the neurologist.

Just as the stomach, when irritated by undigested food, transmits to the brain in gastric epilepsy a morbid irritation, and a convulsion is the consequence, so does it send irritations, that are followed by headaches.

We are to meet these conditions therapeutically by special interference and proper remedies.

There is a somewhat rare variety of headache, but an excessively painful one,—I allude to rheumatic headache. The pain is superficial; there is a diffused hyperæsthesia over the scalp, which is very sensitive to touch. The disease may be deeper, and the dura mater be the seat of rheumatic inflammation. This is the rare variety. The external hyperæsthesia is due generally to cold. I have found it amenable in a very few minutes to the faradic current applied by the wire brush. Of course, alterative medicines will be required should there be much constitutional participation.

Headaches are associated with syphilis in nearly every instance. Oftentimes there are deep organic changes, sometimes of the dura mater, or there may exist a tumor. The headache is intense, localized, and not always attended by acceleration of pulse. It is needless to say it is worse at night. Inunctions of mercurial ointment have met my anticipations in many cases. In old cases we naturally resort to specific medicine.

The suboccipital headache of malaria is often uncontrolled by quinine alone. The combination of arsenious acid is of great use, and the addition of a small quantity of belladonna increases still more its effect.

Neuralgia is dependent upon so many causes that it will be difficult to consider its therapeutical indications without going very deeply into the history and etiology of the disease. The peripheral forms, however, deserve notice in a paper devoted to the discussion of functional diseases, and, as these are very commonly met with, particularly the facial form, it might be apropos to speak of a few serviceable remedies. I know of none so good as iron, quinine, and belladonna, or arsenic in some one of its forms. This prescription is a good one, I think, as it contains three of these agents:

R Morph. sulph., gr. vi;
Ext. belladonnæ,
Ext. nucis vomicæ, aa gr. xii;
Ferri et quiniæ citrat., ℥iiss.—M.

Ft. massa et divid. in pil. No. xlviii, one t. i. d.

Strychnia is of great benefit in the anæmic variety of this disorder.

Peripheral neuralgia is treated most successfully by local applications, and among these come galvanism, chloroform, irritant applications, such as blisters, etc., and the actual cautery. The application of chloroform and of bisulphide of carbon has been recommended by several English writers. One of these substances should be poured upon a piece of cotton, and the same placed in a wide-mouthed bottle. The mouth of the bottle is to be then held against the most painful part of the face for a few minutes. A few drops of nitrite of amyl inhaled have often stopped a severe neuralgia.

The hypodermic syringe is so much used that it would be unnecessary to allude to it. I would only speak of certain solutions that have been tried with different degrees of success.

Morphine stands prominently forward as the best. Combined with atropine it is perhaps more efficacious than when injected alone. In neuralgia, chloroform injected hypodermically has been highly recommended by Roberts Bartholow. I think its greatest fault is the production of abscesses. I have used it several times, but have always had unpleasant consequences of this kind. The irritant nature of this drug forbids its application to the skin even locally. We have all seen the blistering produced by the local application. How much more intense must be its action beneath the skin!

Blistering the skin, and afterwards applying morphine to the denuded surface, is effectual in stopping some forms of peripheral neuralgia.

I have lately tried, with the most satisfactory results, the local application of the ether-spray by the atomizer. Freezing of the skin just anteriorly to the ear will cut short a violent attack of facial neuralgia in a few moments.

In certain forms of facial neuralgia, particularly where there are points of irritation, the actual cautery-iron, brushed over these points, will cure the patient.

Perhaps one of our best remedies is electricity. In the form of galvanism we may affect the cervical sympathetic, diminish the cerebral hyperæmia, or by stronger currents increase it. The poles should be held over the nuchæ or lower down, and over the mastoid bone, or upon both temples. In neuralgia the positive pole may be held just back of the ear, and the negative passed over the several branches of the fifth nerve.

The faradic current often relieves many headaches, particularly if they are diffused over the scalp, and if they are aggravated by heat to the head, or by pressure.

The application of cold is one of the best local means we have to modify or stop headache, particularly if it be of the hyperæsthetic variety. Bladders filled with ice, cold douches, and other expedients enable us to successfully combat it.

The organic headaches deserve mention by themselves, so I will not venture upon such a wide field. In all cases of this kind it is a symptom, and, while attempting to relieve it, we must not forget that there is generally a cause.

CRITICISM ON A SO-CALLED CASE OF
"INFECTION BY SYPHILITIC SEMEN."

BY FRED. R. STURGIS, M.D.,

Lecturer on Venereal Diseases in the Medical Department of the University of the City of New York, etc.

IN the November number of the *New York Medical Journal* for 1874, a case is recorded by Isaac Smith, Jr., M.D., of Fall River, which is very curious, and, did it prove what it claims to, would be highly valuable. It is headed "Infection by Syphilitic Semen," in which the writer states that he believes he is possessed of facts which will in the future render the ultimatum untrue, that proof of infection by syphilitic semen has ever been adduced in a single instance.

That I may state the case candidly and honestly, I shall copy the doctor's case in full, and then give my own criticisms.

"In February, 1872, a gentleman called upon me for advice about a sore 'he had upon his penis.' Upon examination, I found behind the glans penis a circular excavation, with indurated and raised circumference, three-fourths of an inch in diameter; said he had had it six weeks; had been under the care of a doctor, who said it was only a 'chafe.' I placed him under mixed treatment and mild citrine ointment locally, and the chancre healed in about two weeks, leaving a cicatrix. In a few days he called and said he was 'breaking out,' and examination revealed the secondary eruption, which in a short time completely covered every part of the body. Treatment was not changed. Salt-water bathing was advised, and in a short time his skin was as fair as before infection. Next, engorgement of the glands both sides of the neck ensued, which was successfully treated by hypodermic injections of iodine, in conjunction with original medicine; one of the glands suppurated, but healed kindly after aspiration and subsequent injections of iodine; almost without cicatrix. The inguinal glands were prominent, but did not require specific treatment. A year passed on, and, disregarding my advice, he was married. I unfortunately assured him, however, that his wife would suffer no detriment *unless she became enceinte*.

"In August, 1873, his wife had prolapsus uteri, and he discovered a sore upon the os, which he attributed to friction. I treated the chancre (for such it was) and put her under mixed treatment,—*i.e.*, iod. potass. et hydr. chl. corros., etc.). This chancre healed in about the usual time, and, the uterus having been elevated, its natural position was retained there by a pessary. Six weeks later I was called to attend her for 'rheumatic fever,' as her husband called it. It was, apparently, in the incipient stage of that disease. The temperature was very high, and articular swelling was present at the larger and smaller joints. The urine was intensely acid. I thought proper to put her under the influence of alkaline treatment, omitting other remedies, which was continued until the urine was loaded with ammonia-magnesian phosphates, and alkaline in reaction, during which time perspiration was profuse, and as that subsided the secondary eruption

appeared. The mixed treatment was now resumed, and the case progressed favorably; the mucous membrane of the nose was slightly affected, but healed under the stimulus of dilute citrine ointment.

"January, 1874, the gentleman called to tell me he had caught disease from his wife. I found he had a urethral chancre, which I treated. As yet there are no secondary symptoms. I was called to his wife also two weeks later, and found her suffering fearfully from engorgement of the os uteri with uterine leucorrhœa, which was treated through the active stage with opiated emollient injections. The active symptoms subsiding, the discharge increased, and I used intra-uterine injections of dilute citrine ointment, which rapidly caused a cure. Since then she has been free from dysmenorrhœa, which she has suffered from since her first menstruation, at times having to remain in bed a week on account of its severity. She has had three painless menstruations since, and is apparently in perfect health.

"She *has never been pregnant*; has never run past her time."

To summarize; a man has a chancre, followed in a little over eight weeks by a secondary eruption and glandular engorgements. By the way, there is no history of mucous patches, one of the most common lesions in this country. A year after his primary lesion, he marries; and six months later—eighteen months after his primary lesion—he infects his wife. The question now is, How? Dr. Smith says, by the semen.

Before allowing this mode of contagion—a point yet *sub judice*, and opposed by many good authorities and by clinical experience—let us see if Dr. Smith has eliminated all other sources of infection, not those remotely possible, but those most probable. And here we are met at once by disappointment. Not one word about the man's subsequent condition from the time he was under the doctor's care until the time of his wife's infection; not one word about his condition or about any manifestations of his disease at or just prior to the time he poisoned his wife. Of course, the man must have been syphilitic, or he could not have conveyed syphilis to his wife; the disease must have been latent in him. Are urethral mucous patches so extremely rare as to be entirely excluded as a probable means of contagion? Which, in the present state of our knowledge, is considered most unusual, the existence of mucous patches in the urethra or direct infection by the semen? Until the existence of this lesion in the canal, upon the membrum virile, or upon any other part of the body capable of affording a means of contagion, be excluded, we are forced to render a verdict of *non-proven*.

The *probable* seat of the lesion is pretty well narrowed down by the presence of the chancre on the os uteri of the wife. Had this not been explicitly stated, it might have been a question whether the disease was not conveyed by kissing, as mucous patches of the mouth are as dangerous as are the primary lesions.

But perhaps it may be asked, Why suspect the presence of mucous patches? For three reasons:

first, because they are the most common lesion of the earlier manifestations in syphilis; second, because they are often overlooked or misunderstood when seated upon the mucous membrane of the penis or in the urethra; and third, because it is more than probable that the man had one within six months after infecting his wife. This Dr. Smith seems to have regarded as a fresh infection, for he speaks of it as a "urethral chancre," adding, "as yet there are no secondary symptoms."

Thus we have a man still under the diathesis of syphilis (for he infected his wife only five months previously) become re-infected, for I suppose the chancre was a primary lesion, and, *mirabile dictu*, going from January to the following November, when the case was reported, without any signs of subsequent symptoms. Now for this chancre; was it a chancre, a chancroid, or a mucous patch?

Chancre, *i.e.*, primary lesion, it can hardly have been, unless our doctrines on syphilitic re-infection are totally untrustworthy: *a man while intoxicated by syphilis does not recontract a primary lesion*. It is to be regretted that the character of the ulcer is not described, and that the condition of the inguinal glands is entirely passed over.

Chancroid it could hardly have been, as the patient "caught disease from his wife," and in her there is no history of chancroid.

Mucous patch? impossible to assert it was, as no description is given of the ulcer. The probabilities are more in favor of this than any of the others.

It would be interesting to have the subsequent history, symptoms, etc., of both, and it is to be hoped that Dr. Smith will give them. The reason I have so freely criticised this case is that it lacks everything to make it convincing, and when the attempt is made to prove so difficult a point as this every possible source of error should be carefully eliminated. I think I may therefore be excused the part I have played in tearing it to pieces; the theory of the transmission of syphilis by the semen rests upon other cases no better than this, and it is only by pointing out their weak spots and guarding in future reports against them that we can ever hope correctly to solve the problem.

At any rate, Dr. Smith must waive his claim of having proved any such hypothesis as heads his paper, and rest content "with the duty of recorder."

16 WEST THIRTY-SECOND STREET, NEW YORK.

LOCALIZED REST IN THE TREATMENT OF PULMONARY AFFECTIONS.

Read before the Philadelphia County Medical Society, November 25, 1874.

BY HORACE Y. EVANS, M.D.

FROM time out of mind there has been a persistent crusade against the corset, yet neither the denunciations of the doctor nor the warnings of the parents could control the sway of the goddess of fashion.

Thrice have queens during their pregnancies endeavored to discard the stay, but so infatuated had

their followers become with it, that even the wielders of the mighty sceptre could not arrest its charms. This practice of compelling the abdominal organs to impinge upon those of the thorax and pelvis, we all know, brings with it a train of positive ills, yet from this evil practice of the ladies we, as physicians, can receive suggestions of practical importance in treating other diseases.

It has no doubt been observed by many of us that, as a rule, pleuritis in women is of shorter duration and of a milder character than in the opposite sex. It has occurred again and again in our experience to have lady patients suffering with an attack of pleurisy put on their stays, get out of bed, and go about their household duties not only with comfort but with positive relief. The priority of application of this stay-principle in the treatment of pulmonary affections appears to rest between Drs. Berkart and McCrea.

The former, in an article in the London *Lancet* of October, 1873, entitled "Rest in the Treatment of Consumption of the Lungs," suggests this principle, and enforces its applicability, not only by most apropos comparisons and illustrations of the successful employment of rest in diseases of other organs, but also by his successful use of it in the treatment of pulmonary phthisis. To Dr. McCrea,* of Belfast, however, we are indebted for a more minute description of the means employed, and a more extended application of the principle.

Of its usefulness he says, "I have seen no remedy equal to strapping the chest in efficiency and general applicability." His experience in its employment had extended over a period of two years, and in almost every variety of chest-diseases.

Dr. F. T. Roberts† says that it is very valuable in certain cases; it relieves symptoms, arrests cough, and thus prevents hæmoptysis.

The mode and means now generally employed to control motion in the thoracic walls is almost identical with that first suggested by Drs. Berkart and McCrea, though the latter, in a recent number of the London *Lancet*, states that he now uses the emplastrum roborans (emplastrum ferri, U.S.) instead of the emplastrum resinæ.

In our hands, the latter, when fresh and thickly spread, was as satisfactory as could be expected of any temporary application of like character. There are two sets of strips employed,—vertical and horizontal. The length and width of the vertical one will depend upon the size of the individual to whom the application is to be made. As a rule, however, it should be three and a half inches wide, and of sufficient length to reach from the sixth rib anteriorly to a corresponding point posteriorly. The horizontal strips extend from the sternum to the vertebræ, and vary from three-fourths to two inches in width.

The vertical strip should be put on first, fastening it firmly in front, and at the moment of deep expiration pulling it over the shoulders and fixing it on the back.

* Dublin Journal of Medical Science, Nov. 1873, and *Lancet* of July 18, 1874.

† London Practitioner, August, 1874.

The horizontal ones are next applied, from apex to base of chest-walls. The ends of the horizontal strips should be covered by broad pieces of plaster to prevent their loosening. The patient should be directed to endeavor to limit the depth of his respirations until the straps are firmly set. The whole or part of the chest thus covered may then be coated with starch or collodion. These are but general directions, which must be modified as circumstances demand. We very soon discovered that the ribs could be compressed to better advantage by lengthening the vertical strip anteriorly as low as the umbilicus.

In applying the horizontal ones, it will be found that in many instances the skin and its subinteguments will wrinkle, and thus leave a large portion of the surface untouched by the plasters, and, as a consequence, lessen their stability. This can be partially overcome by placing a compress of linen two inches wide and one inch thick against the side, from the axilla downward. The skin will fold or wrinkle against the edges of the compress, and yet give a central point of fixedness for the strips.

In our hands this apparatus required renewal once a week.

In cases where pulmonary abscesses are in process of evacuation, and the chest-walls becoming depressed, great comfort will be afforded the patient by placing compresses over such depressions before applying the straps; in addition to the comfort given, this seems to assist in evacuating the vomicae and facilitate cicatrization.

Our experience in this mode of treating chest-affections is limited to thirteen cases: six of tubercular phthisis (four chronic and two acute), two of pleurisy, four of pneumonia, and one of emphysema.

All the subjects were adults. As we are not an enthusiast in the matter, the simple result as noted will be briefly related.

In the acute stages of tubercular phthisis, pneumonia, and pleurisy, the pain was unquestionably modified, and the cough arrested to a greater extent and with less objectionable sequelæ than by internal medication.

In none of the phthisis-cases was there an attack of hæmoptysis during this treatment.

In pleurisy, the number of the respirations was reduced four to six per minute by the application of the straps.

In the large majority of the cases the patient at once expresses feelings of comfort following the dressing.

In pleurisy *alone* can we give this mode of treatment a higher title than a reliever of symptoms. In the two cases to which we have referred, the duration and severity of the disease were both modified.

Its success in this condition will be at once manifest when we remember that the beneficial effects are attributed to the relative immobility of the pulmonary parietes; if then, by this means, as we have just shown, we can control the extent of the motion of the costal pleura and at the same time

lessen the number of respirations, an active irritant to the inflamed surface is removed, and they can all the sooner be restored to a healthy condition.

As we have stated, we believe the principle of localized rest in chest-affections to be a correct one, but we have not as yet reached that perfection in appliances to the chest that the surgeon has in controlling motion in fractured bones and inflamed joints.

EXAMINATION OF HEIDENBLUT'S STOMACH AND ITS CONTENTS.

BY CARL SEILER, M.D.

THROUGH the kindness of Dr. W. W. Keen, whom I had the pleasure to assist in some experiments on the body of Heidenblut (executed on January 20), I came into the possession of the stomach and its contents, which I wanted to examine as to post-mortem digestion, and as to the nature of the acid in the gastric juice.

The organ was removed from the abdominal cavity exactly two hours after death; the last meal, consisting of two boiled eggs, bread and butter, and a cup of coffee, having been taken three hours before the execution. I took the stomach to the University of Pennsylvania, and there emptied it, and opened it in the presence of Prof. F. G. Smith.

The contents were a semi-fluid, with a few pieces of undigested egg and bread floating in it. The mucous surface of the organ at the greater curvature near the pylorus was very highly injected, and presented a deep red color, while the rest of the mucous membrane was much paler, and appeared perfectly healthy. This dark hue was well defined, so that it could easily be recognized, even at a distance.

This condition of things was ascribed to post-mortem digestion, and Prof. Smith exhibited it as such to the class, the color having, however, somewhat changed after the opening of the organ by the unavoidable exposure to the atmosphere. The contents were divided, Prof. S. keeping one part, and I taking the other for chemical and microscopical analysis.

The microscope proved that the darker portion of the mucous membrane had undergone partial digestion, as the villi were seen to be sloughed away, while they appeared perfectly natural in the paler parts of the membrane. Dr. T. G. Hunt kindly examined the specimens and corroborated my observations.

The contents exhibited the usual appearance under the microscope, containing epithelial cells, mucus, oil-globules, starch-granules broken and whole, and undigested pieces of bread and white of egg.

The chemical experiments were made, with the kind assistance of my friend Mr. F. H. Rosengarten, in the following order:

1. After apparatus and materials were proved chemically clean and pure, and after an acid reaction of the mass to be analyzed was proved by test-paper, we added some nitrate of silver to a portion of the mass, which gave a dense, thick precipitate

of chloride of silver, proving the presence of chlorides.

2. A portion was placed in a distilling-vessel and gently heated on a sand-bath. The vapors and distillate gave an acid reaction, but no precipitate was formed by the addition of nitrate of silver, except a faint opalescence, probably due to some organic matter. This proved that no hydrochloric acid was present, for this acid would have distilled over at the temperature obtained, and been detected by the silver salt.

3. A portion of the material was neutralized with caustic soda, and heated in a test-tube. To this was added a hot solution of proto-nitrate of mercury, which gave a muddy precipitate, which, after standing for some time, settled and left the supernatant liquid clear, and of a dark-red color. In it, after evaporation, the rosette-shaped crystals of lactate of quicksilver showed themselves under the microscope; the salt produced being $\text{Hg}_2\text{O}, \text{C}_6\text{H}_5\text{O}_5 + 2\text{HO}^*$.

4. To another portion of the material, freshly-made carbonate of silver was added, and the mixture boiled and filtered. In this filtrate the peculiar brush-shaped crystals of lactate of silver were found, and produced a beautiful effect of color under the action of polarized light. $\text{AgO}, \text{C}_6\text{H}_5\text{O}_5 + 2\text{HO}^\dagger$.

5. Neutralizing with baryta-water gave no evidence of the presence of sulphuric acid; the addition of sulphate of zinc to the baryta solution produced a precipitate of sulphate of baryta.

6. This was filtered, and the liquid found to contain the characteristic crystals of lactate of zinc. $\text{ZnO}, \text{C}_6\text{H}_5\text{O}_5 + 3\text{HO}^\ddagger$. Other lactates were produced, and their crystals recognized under the microscope.

These results of our experiments, I think, go to prove that the acid reaction of the material was due to lactic acid and not to hydrochloric acid. The tests for sugar were also applied, and glucose was found, thus showing the conversion of starch into this material in the interior of the stomach and perhaps during the act of mastication and insalivation.

PHYSIOLOGICAL LABORATORY OF THE UNIV. OF PENNA.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF R. T. LEVIS, M.D.

Reported by Dr. JOHN B. ROBERTS.

GUNSHOT WOUND OF THE LEFT LUNG PRODUCING LARGE PLEURAL EFFUSION—PARACENTESIS THORACIS BY THE ASPIRATOR, FOLLOWED BY FREE INCISION OF THE CHEST-WALL—CONVALESCENCE OF THE PATIENT.

GEORGE E., aged 19, was shot by a policeman who fired at him as he was endeavoring to escape, the bullets taking effect in the back. The first entered one inch to the left of the sixth dorsal spine, passing upwards and somewhat inwards, while the other struck about four inches to the left of the seventh vertebral spinous process near the angle of the scapula. The wounds

showed that the bullets were large, and it was evident that they had penetrated the lung, from the profuse hemorrhage that occurred by the mouth; evidently proceeding from some large bronchial vessel injured by the bullets which entered near the root of the lung where the great vessels are situated.

When admitted to the hospital, the patient's face was blanched, he presented the symptoms of shock and exhaustion from hemorrhage, and while in the receiving-ward expectorated a large amount of blood. In order to induce reaction, morphia, in conjunction with stimulants, milk, and beef-tea, was administered.

On examination, eight hours afterwards, the existence of pneumothorax on the left side was diagnosed from the marked tympany present, and the displacement of the heart, which struck the thoracic wall on the right side of the sternum. Loud râles were heard over both lungs, the expectoration of small amounts of blood continued, the pulse was 130, and the respiration 38 per minute. As the patient had reacted by this time, the administration of stimulants was discontinued, and one drachm of infusion of digitalis ordered every fourth hour.

On the day subsequent to his admission, the patient complained of much distress in the left side, and began to show febrile symptoms, which were combated by the more frequent administration of digitalis, given with spiritus etheris nitrosi and liq. ammonii acetatis. Under this treatment the temperature fell from 102° to $98\frac{1}{2}^\circ$, and the pulse was reduced from 128 to 99, and became stronger.

This treatment was persisted in until the seventh day, when the boy sweat a great deal, and presented a red spot upon the cheek; he had, however, no chill. The digitalis was now considered unnecessary, and iron with quinine substituted.

By physical exploration it was found that there was a large effusion in the left pleural sac, which pushed the heart far to the right, caused great dyspnoea, and produced, by its pressure upon the diaphragm, a troublesome hiccough, which was especially frequent after he took food into his stomach.

In order to relieve these urgent symptoms, for the patient was almost moribund, it was determined to tap the chest; and accordingly paracentesis thoracis was performed by passing the aspirating needle into the pleural cavity at the sixth intercostal space, about two and a half inches to the left of the nipple. Care was taken to keep close to the upper edge of the rib, lest, if thrust into the chest too near the border of the rib above, the point of the needle might strike the intercostal artery running in the groove at the lower edge of the rib.

After the abstraction of forty-eight fluidounces of dark bloody serum, great relief was given to the patient, and his respirations decreased from sixty to forty per minute. The puncture was covered with adhesive plaster, and the daily administration of stimulants ordered.

The boy continued in a very comfortable condition for five days, when he again became apparently moribund, having severe pain in the left axilla, an erysipelatous blush around the puncture made by the needle, and great oppression of breathing from the fluid which had again accumulated.

It was proposed to reopen the wound made by the aspirating trocar, in order to let the fluid drain off, but, as the orifice had closed, another puncture was made by a bistoury immediately below, in the seventh interspace, from which thirty-eight ounces of sanguinolent serum escaped. This second operation was followed by a manifest improvement in the patient's condition. His pulse, which previously had been weak and fluttering, became stronger and more regular, and there was much less difficulty in respiration.

After a time he once more became greatly prostrated,

* Liebig's Handwörterbuch, vol. v. p. 292.

‡ Loc. cit., 293.

† Loc. cit.

having a scarcely perceptible pulse, and it was thought that he was at last to succumb, but he again rallied and began to improve.

The wound is now kept patulous with a soft rubber catheter, to allow the fluid, which has become purulent, to drain away, and thus to remove as far as possible the danger of septic influences from the pus in the pleural sac. Still further to guard against the injurious effects of the purulent effusion, the cavity has been washed out daily with carbolic acid and water (3i ad Oi), about a gallon of which is forced through the opening and allowed to flow out by turning the patient upon his side. Instead of using a syringe for this purpose, the resident surgeon employs hydrostatic pressure as in Thudichum's nasal douche, which gives a continuous stream that can be kept up as long as necessary without disturbing the apparatus. The end of the tube which conveys the solution into the cavity is thrust in about four inches, and touches the pericardium, for the impulse of the heart can be distinctly seen moving it.

This method of treatment has been steadily continued, and now the patient presents no bad symptoms, but is convalescent. He was undoubtedly saved by tapping the chest, and thus removing the fluid pressing upon the lung; and has since been sustained by the administration of tonics and by the thorough cleansing of the pleural cavity with carbolized water.

The bullæts, or at least one of them, are imbedded in the pulmonary tissue, and may hereafter occasion trouble; but at present his progress towards recovery is exceedingly satisfactory.

Now, about three and a half months since the receipt of the injury, the patient is walking about the wards.

BELLEVUE HOSPITAL.

SERVICE OF PROF. L. A. SAYRE.

Reported by WILLIAM A. GEORGE, M.D.

HIP-JOINT DISEASE.

CASE I.—The first case I wish to show you to-day, gentlemen, is that of a little child four years old, who has had hip-joint disease since last April a year, and who has been treated with one of "Sayre's" splints. Unfortunately, notwithstanding that, the disease has gone on to the third stage, and there is now an immense abscess formed on the outer side of the joint, which must be opened, and, perhaps, after opening and exploring the cavity we shall find the bone has become involved, and may require exsection; but even if we find this to be necessary, we shall not attempt exsection to-day, as the abscess is so large that it is better to allow its walls to contract before the operation of exsection is performed. As I told you, she has been treated with this splint for the purpose of extension and counter-extension, but, not being properly applied, the object for which the splint was constructed—extension and counter-extension—was not accomplished; it was applied by another person wrong side up, and did not exert that extension and counter-extension which Sayre's splint will afford when correctly put on. The reason I have brought this patient here to-day is to show you the dangers of not applying the splint exactly right, and in this boy, by way of contrast, I show you another case where the splint was properly used, and where the result, as you perceive, is a perfect cure. [Showing case recovered.]

The instrument on this child, in the first place, was not properly constructed. The instrument-makers generally want to improve upon the splint with some new-fangled notion of their own, which ends, in many instances, in rendering it useless for the purpose desired. You will notice, with the instrument upon her now,

which I have to-day placed there, the child is perfectly comfortable, notwithstanding this enormous abscess, and if you will watch her face when I make pressure on the limb, you will observe there is no pain.

I regret that I had not the opportunity of seeing this case before it became so bad. I shall not aspirate this abscess, but *incise*. Aspiration is a very nice little operation for draining off water from the bladder or serous effusions from the pleura or the joints, but in cases of cavities containing pus it will not do. [The Professor here opened the abscess.] You see with what force that gushed out. Now, having opened it freely, I explore the parts with my finger, and discover a firm band surrounding the joint like a capsule, which must be divided that I may make further examination; and here I find a small hole leading into dead bone. This abscess should have been opened months ago. I have now reached bottom, and find the sinus extends clear round the thigh, and therefore make this counter-opening, and draw the seton through. I now fill the wound with oakum soaked in Peruvian balsam; I then cover the outer part of the limb with a large wad of the same material, securing it there with a roller round the limb, which roller also serves the purpose of contracting the walls of this extensive abscess, and with this dressing the pus will continue to discharge, just the same as if there were no obstruction. This, gentlemen, is the peculiar advantage of oakum as a dressing in all cases of extensive suppuration. It allows the free percolation of pus through it, whereas lint, particularly cotton lint, acts as a tampon, preventing the discharge, and it is the retention of these noxious secretions which is the greatest detriment to the patient. Take a bale of cotton, put it in the East River; at the end of a year, when you take it out, the centre of the bale is as dry as when you cast it in, it being impermeable to fluids; hence the serious objection to the use of cotton lint to suppurating sores, and the immense advantage of this oakum dressing in all cases of extensive suppuration. I next put a piece of oil-silk over it, for the purpose of keeping the child's clothes from being soiled; we re-adjust the instrument, which was taken off for convenience in dressing, the mother in the mean time having kept the leg extended; she was the instrument while the instrument was off. Here in this bowl we have at least eight ounces of pus, in addition to what was lost at the first gush. I found an opening there leading into the joint, but there is very little destruction of the head of the femur, it being quite large, almost its normal size, only a small necrosed portion being found on its posterior surface, and as this opening is at the posterior inferior point of the acetabulum it may get well without exsection. The abscess is now open; there is no doubt about that [Laughter]; and if there is only a small portion of the bone involved it may perhaps be exfoliated without much further trouble.

A case very similar to this I saw some years ago in consultation with Dr. Jordan, in which the abscess was opened, and the finger passed into it discovered an opening in the capsular ligament, and carious bone was detected; but the extent of the abscess was so great—like the present—that exsection was not performed, but left for future operation after the walls of the abscess had contracted. A tent of oakum was placed in the opening, giving free exit to the secretions of the joint; and by firm compression around the joint with proper bandages, and the correct application of an extending apparatus, the child in the course of a few months entirely recovered, with quite a considerable degree of motion at the hip-joint. The abscess entirely closed, the child enjoyed perfect health, suffered no pain in the absence of instrumental support, and remained in this condition for nearly three years, but finally died of an acute attack of another disease. At the post-mortem, Dr. Jordan fortunately obtained the hip-joint, which I

have in my possession. Upon opening its capsule the joint appeared to be perfectly healthy, although the head of the femur was very abnormally shaped, the ligamentum teres being entirely destroyed, and the fossa, where it is attached to the head of the femur, covered by a fibro-cartilaginous membrane, which was continued over the irregular flattened head of the femur, being rather thicker than the normal articular cartilage. The joint in all other respects appeared perfectly healthy, although the head of the femur had been thus irregularly shaped by the carious exfoliation during the previous existence of the disease, showing that even cases of caries of the joint with open sinuses sometimes recover with a moderate degree of motion. The ordinary rule with a joint thus open with carious bone in it is further and further destruction, and therefore exsection is necessary; but in some very rare instances, as in the one just quoted, free exit to the secretions being obtained, reparative inflammation may take place instead of destructive inflammation, and sometimes result in recovery without exsection. We shall therefore give the child the opportunity of being restored without an operation, if possible, and proceed to exsect it at some future time, if necessity requires.

Case II.—In this young man, gentlemen, I present to you a case of hip-joint disease [previously referred to] which, I think, is cured,—we will see to that presently,—and will serve to illustrate the correctness of several points in the treatment to which objections have been made. Dr. Yale will read to you the history, from the case-book. “Willis W., æt. 12; saw him for the first time April 1, 1872. He says he has been lame off and on for more than a year; has been supposed to have rheumatism, and received treatment for that complaint. Getting no better, he is brought here. *Present condition.*—Pain principally in the right knee, and has been so for the past six months; right limb abducted, flexed, and fixed; experiences great pain on pressure or adduction. *Diagnosis.*—Hip-disease, right side, second stage. *Treatment.*—Extension by weight and pulley, and short splint.

“April 10, 1872.—Applied short splint.

“October 9, 1872.—Has been dressed once by Dr. Yale since above date; to-day find the child much improved; re-adjusted splint.” Here, gentlemen, has been an interval of six months with only one dressing, and yet Dr. Taylor says, and prints it, too, that this splint cannot be applied so as to remain in position without being changed every few days.

“February 9, 1873.—Four months since last seen. Re-adjusted dressings at lecture-room, Bellevue Medical College; *very much* improved.

“May 17, 1873.—*Greatly* improved; re-adjusted dressings.

“December 26, 1873.—Splint re-applied; very much improved; motions almost perfect; flexings somewhat limited; carefully examined by Dr. Sayre.

“June 10, 1874.—Splint re-adjusted; improving rapidly.

“November 18, 1874 (that is, to-day).—Entirely well, with almost complete motion, flexion being the only defect, and this only slightly less than normal. I remove all dressings, the plasters being in the same place as when applied, June 10, and discharge him cured.”

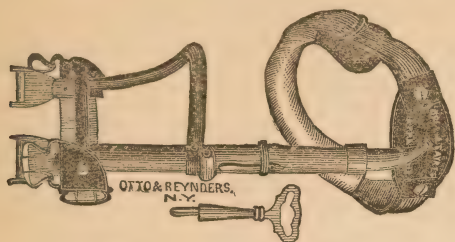
I have dressed his leg six times since April 10, 1872, or, on an average, once every four or five months. Two years ago, when the splint was first applied, this limb, on account of the effusion in the joint, was flexed, fixed, and abducted. To-day I remove the plaster from his leg, as you see, and along with it the entire external cutis of his thigh, from one end to the other, comes off, the plaster having retained its position exactly where I put it at the last application. You have now seen this

disease in the number of cases presented to you during the last few weeks in all its stages, and here in this case the cure complete.

Case III.—I will now show you another one, in a little child who was brought to me a few days ago, and who had, as was stated, been using a Sayre's splint, but for my part I cannot imagine how a man could make such a mistake. It resembles, to a great extent, Dr. Hamilton's hip-joint splint for the purpose of keeping the joint quiet, and when you wish to fix a joint and render it absolutely rigid, this wire-gauze splint is a very useful instrument for the purpose, but in the treatment of hip-joint disease I do not want to keep the joint at rest. If the disease belong to the capsular and ligamentous portions of the joint, those parts must be kept at rest, but in hip-joint disease the bones, articular cartilages, and synovial membrane are the parts involved, and the capsular ligament has nothing to do with it; besides, if these ligamentous tissues are kept quiescent for any length of time, they undergo pathological changes, losing their elastic property, and consequently the ligaments and muscles require movement, but the bones of the joint require to be relieved from pressure, and the capsular and other ligaments which are not involved in the disease should be moved in order to retain their normal condition. Perfect and entire rest of healthy joints will end in complete ankylosis. You may cure with this splint,—with ankylosis,—and if this is the best that can be done, in Heaven's name do it; but if you can obtain *motion* in addition, then all the better. This surgeon, having secured rigidity of the parts, modified the splint of Dr. Hamilton by placing a firm piece of sole-leather on the inner side of the knee secured to the outer portion of the gauze splint by a band, and, buckling that tight around the femur above its condyles, presumed that he had so modified the instrument as to be justified in calling it a Sayre's splint, and thought that it would answer the very same purpose, forgetting in the mean time to apply the ratchet and key, by the use of which a graded extension could be applied to the limb, which is the essential principle in my instrument.

Now for the treatment. He wants extension at about that angle (the heel a foot higher than the table, the patient lying down). First apply a strip of adhesive plaster on either side of the leg, extending above the knee some two inches, to prevent traction on the lateral ligaments of the knee-joint; secure with a carefully-adjusted roller, taking care to over-lap the plaster and to take an extra turn around it with the roller, leaving the lower ends of the plaster projecting at the malleoli for night extension by means of weight and pulley. Next apply a many-tailed fan-shaped adhesive plaster on the outer and inner sides of the thigh, measuring first with your extension-instrument, so that the tags of the plaster will exactly conform to the places of attachment upon it. Having secured these with a roller, using care at the upper part of the thigh to reverse first each alternate tail of the fan-shaped plaster in carrying round the roller, and with another turn taking in the others,—braiding them in-and-in, basket-fashion,—run the roller down to the knee, and sew. Now apply the extension-instrument, which consists, as you see, of a circular cross-bar surrounding the crest of the ilium, well padded on its inner surface, and at its two extremities a perineal band for counter-extension; on its outer surface a ball-and-socket joint, from which runs an iron rod or bar down the outer side of the thigh to within two inches of the lower extremity of the femur. This outer bar is divided into two sections, one running within the other, and gauged or controlled by a ratchet and key which can make it longer or shorter. At the lower extremity of this outer bar is a projecting branch going around to the inner surface of the thigh, to receive the attachment from the plaster on its inner surface. Both of the

lower extremities of the instrument terminate, as you observe, in a roller or wheel, over which the tags are attached to the two buckles placed at the lower extremities of the instrument, as per cut annexed. In apply-



DR. L. SAYRE'S HIP-SPLINT.

ing it, first buckle on the straps at the lower extremity of the femur, then pass the strap under the femur to the buckle at the outer side of the instrument for the purpose of keeping it in place. We now pass the perineal band from one end of the upper part of the cross-bar around the perineum, and buckle it with sufficient tightness to be comfortable; next we insert the key into the ratchet, and make gradual extension until the patient is made perfectly easy, and until compression can be made upon the femur against the acetabulum without causing pain. The object of this key and ratchet is to obtain accuracy of adjustment, which is much easier effected than by buckling and unbuckling the straps, which would have to be done very frequently to accomplish the same purpose. The extension can be applied with so much force as to do great damage by obstructing the circulation in the perineum, and many think that the extension is to be applied for the purpose of drawing the head of the femur out from the acetabulum, which is an impossibility. The object of the extension and counter-extension is simply to prevent concussion of the head of the bone against the acetabulum, and for this reason it is always necessary to make your perineal band of a non-elastic substance; yet many persons in using this instrument have made the perineal band elastic, which may answer the purpose of giving ease to the patient under ordinary movements, but if any additional weight is placed upon the limb, the elastic perineal band, giving way under pressure, would necessarily fail to protect the bones from coming in contact. You will therefore see the necessity of the non-elastic perineal band; and the key, which, you will observe, regulates the elongation and shortening of the instrument, can be so manipulated as to give the nicest accuracy of adjustment, and, consequently, the greatest ease and comfort to the patient. You will now perceive, when it is applied and the extension properly adjusted, that I compress the femur over the knee with sufficient force to move the entire body without giving him the slightest pain. We will now reverse the key to take off the tension, and you will observe the lightest pressure upon the knee causes the patient to wince in the greatest agony, and yet, as you see, by extending it with a few turns of the key I now make pressure, and you behold the face of the patient wreathed in smiles, exhibiting no traces of pain whatever. This dressing will remain for an indefinite period, and if any of you put on the plasters in this manner, they will stay on for any reasonable length of time, and not, as Dr. Taylor says, for only a few days.

Case IV.—The next I have, gentlemen, is one sent from a long distance for the purpose of having the knee-joint exsected. It is one in which there has already been an exsection of the elbow-joint, with a good result, giving the patient perfect use of the joint. The girl is about fourteen years of age, and some two years since, while her elbow was yet sore, she had a fall,

and, in endeavoring to protect it, she received an injury on the knee. Extensive suppuration followed, numerous openings occurred, and the discharge was very abundant and continual. These openings which you see lead into canals connecting with one another, and pass in every direction around the joint. I will, however, since the patient is under the influence of an anæsthetic, perform the operation, not of exsection of the knee-joint, which is not involved in the disease, but of laying the sinuses open first, and talk to you about it afterwards. [The Professor here performed the operation, remarking the while the extent of the false membrane lining the various pouches and canals formed by the disease, its glistening appearance, the thickness of the walls, and the extent of the incisions which were required. Applying to the wounds Peruvian balsam, filling them with oakum, and passing over all a snugly-fitting and well-adjusted roller, he proceeded.]

This case is one of bursitis. It is not synovitis, scrofulous ulceration, or white swelling of the knee-joint; the bones have not been touched; the disease has been wholly around the joint,—extra-capsular in every respect,—and it is one of such importance, especially regarding its correct diagnosis, that I will call your attention to it a few moments longer.

As I before told you, two-years ago this girl received a fall and consequent injury of bursa immediately over the patella. From that time to the present she has been laid up, and under constant treatment; abscesses formed, which at first were aspirated; no benefit having been derived from this, however, they were punctured; they formed again and again, made openings of themselves, until now, as you saw, all the parts around the joint were completely riddled with sinuses, which were connected with each other, as was demonstrated before the operation by using the flexible probe. The only way in which to treat such cases is to lay open the canals freely, when you can very readily tear away their lining membrane, which has been productive of the discharge, and which, being destroyed, may be replaced by healthy granulations.

The incisions, you observed, I made with great freedom up and down the leg, and this can always be done longitudinally parallel with the vessels and muscles with the greatest safety; but care should be taken in making them *around* the limb, as arteries and veins are severed and muscles divided by transverse incisions of only half the extent of these I have made up and down the limb. Those of you who have lived in the West or near forests are aware how quickly a tree dies when girdled, and you also know when the old farmer, going his rounds, discovers one of his cherry-trees "hide-bound," and, taking out his jack-knife, slits it from the crotch to the ground, he produces a beneficial, and not injurious, effect. Just so it is in cases like this before you.

But your operation is not complete with only these incisions. That lining membrane will still continue secretory action, which will last as long as does the patient. It must be destroyed; adhesive inflammation must be set up within its walls, and the parts for a time kept quiet, being careful, however, to prevent ankylosis by using passive motion at the proper time, and by these means you will effect a cure.

And now for the reasons why I knew this was not a case of disease of the knee-joint proper,—and you will perceive it had its difficulties. Here was a girl, pale, thin, and weak, confined to her bed for two years with this suppurative disease of the knee, a history of former disease of the elbow-joint with excision, and of whom many would exclaim, "Poor thing! how terribly has that scrofula been preying upon her system! will it ever cease?" and such similar remarks; besides, what

else could be expected from our past education in regard to these matters? She was sent here, as I before said, for excision, but the moment I saw her knee I told my assistant that it did not look like a disease of the joint proper or of necrosis of the femur, as the openings did not present the appearance of those leading to dead bone, and which were first described by the late Dr. Alexander Stevens. "They looked," said he, "like a hen's anus, all pouting out with a circular puckering-string like a sphincter muscle." Sometimes, however, you will have to paint them a little red to make the resemblance more striking. Next, when probing the sinuses, I found where they led to; not by a straight stiff probe, which would puncture in overcoming resistance, but by a flexible one, which would follow the many devious windings of these canals. This examination satisfied me that there was no disease of the bone; and, in order to find that there was no disease of the joint, I firmly pressed all the articulating portions of the joint in every direction without giving her any pain whatever, and also made firm pressure with the thumb and finger over the coronary ligament without eliciting any pain, thus satisfying me that the disease was entirely extra-capsular. Our operation, which laid these sinuses open freely, gave us a fair opportunity of exploring these parts fully, and thereby proved the correctness of our diagnosis.

Case V.—Here is a man whose elbow-joint you all saw me exsect last fall. You can now perceive what perfect motion he now possesses. If you will remember, I took off the heads of the radius and ulna, chipping off the olecranon, but leaving that portion to which was attached the triceps muscle, and then sawed off the end of the humerus as far up as the disease extended. By leaving this piece of the olecranon to which the triceps is attached, I have retained for this man, as you perceive, the perfect power of extension, and the patient is now able, as you also observe, to lift this chair with ease.

TRANSLATIONS.

THE TREATMENT OF MALIGNANT PUSTULE WITH CARBOLIC ACID (Dr. Klingelhoeffer: *Berliner Klin. Wochen.*, 1874, No. 44).—The use of carbolic acid in the treatment of malignant pustule has been advocated in recent times, and Dr. K. has had several opportunities of testing the efficacy of this mode of treatment. He has had, in the course of the last few years, five persons with this affection under his care, all of whom were tanners and contracted the disease in the same tannery in Offenbach.

It is a striking fact that the seat of the primary pustule was not on parts of the body which came into direct contact with the infected hides, but, with the exception of one case, at such points that any direct infection was highly improbable; and this improbability served to render the diagnosis more obscure and difficult.

Two of these cases, which occurred several years ago, were treated by cauterization of the pustule with caustic potash, after which liquor sodæ chlorinatæ was applied locally, and also administered internally. One of these cases, in which the pustule was seated at the angle of the jaw, recovered, while in the other, in which the pustule was on the side of the neck, a fatal result followed within forty-eight hours.

The remaining three cases occurred in later years, and were treated successfully with carbolic acid. Although no definite conclusion can be drawn from the results of the treatment of so few cases, still Dr. K. thinks that in the use of this remedy he has a valuable aid in treating this affection.

The remedy was applied in the same way in all three cases: the pustule was cauterized as deeply as possible with carbolic acid which had been liquefied by heat, after which compresses were applied which had been saturated in a concentrated solution of the same acid, and it was also given inwardly. The solution for local application was of the strength of 1 to 8 of water or linseed oil, and for internal administration a solution of 0.6 to 180 parts was given in tablespoonful doses every two hours.

It has been recently asserted that this disease can be conveyed by contagion to persons who are about the patient; but nothing of this kind was noticed in those cases, although in the last case the circumstances were favorable, since the family was poor, and six children occupied the same room with the patient, and one of them, who suffered from eczema, even slept on the same bed.

W. A.

URETHRAL FEVER.—M. Paulet read at a recent meeting of the Société de Chirurgie a report upon a memoir of M. Roux on this subject. M. Roux describes briefly the classic symptoms of this grave complication. He insists upon the analogy which exists between urethral fever and palustral fever. According to M. Roux, the determining cause of urethral fever is as follows. When, after a stricture of the urethra, there is no alteration of the mucous membrane, the sound passes without giving rise to an accident. When, however, the mucous membrane is lacerated or ulcerated, there results an attack of fever if the alkaline and fetid urine is passed through the canal shortly after the operation.

M. Paulet thinks that M. Roux's opinion is too sweeping; all surgeons admitting a previous alteration in the urine. Generally, when the urine is normal, no attack of urethral fever is observed; it is only when the urine is altered, the secretion being slow and incomplete, that accidents follow catheterism.

But is the lesion always seated in the canal? Yes, when there is an old stricture or an alteration of the urethral mucous membrane. But when the urethra is healthy, when the urine is easily passed, may not absorption take place by the vesical mucous membrane? The alkaline state of the urine allows it to dissolve the epithelium and denude the derm of the bladder, and the contact of the sound is sufficient to cause a lesion of the vesical walls.

M. Roux, placing the point of departure for the disease in the urethra, has chosen the name *urethral fever*. M. Paulet, however, prefers the title *urinary*, or *urethro-vesical fever*. M. R. says that on account of the alkalinity of the urine fermentation takes place, and that absorption of the fermentive material gives rise to the fever; that it is a zymotic affection. Carbonate of ammonium is absorbed in too small quantity to be considered a cause of the fever.

In affections of the urethra and bladder, the kidneys are generally attacked. But M. Roux maintains that cases of uræmia are quite different from those of urinary fever. This can hardly be said to be true as regards certain forms of uræmia,—comatose, etc.

The distinction, however, is difficult to make.

To prevent the access of fever, the author advises that the original affection should be treated. Bromide of potassium should be given as a calnative, proper instruments should be employed, and sulphate of quinine and ergot should be administered. After the access of the fever, alcohol and sulphate of quinine may be employed.—*Gazette Hebdomadaire*, No. 51, December 18, 1874.

X.

PUNCTURE IN STRANGULATED HERNIA.—At a recent session of the Société de Chirurgie, M. Labbé reported two observations made by M. Ollivier (of Rouen) of strangulated hernia treated by puncture.

A man 64 years of age had an inguinal hernia, strangulated during the last twenty-four hours; taxis under chloroform was unavailing. Returning the next day, forty-eight hours after the occurrence of strangulation, puncture of the tumor was performed. M. Labbé remarks that a patient with strangulated hernia should never be quitted until the hernia is reduced or an operation has been performed. Upon opening the tumor, a small quantity of a brown, serous fluid exuded. The intestine, inflamed and covered with false membranes, was reduced. The patient died eight hours subsequent to the operation. This fact is unfavorable to the operation by puncture of the intestine; and the operation should be performed at an early moment, when the intestinal walls retain their elasticity to a sufficient extent to close spontaneously over the wound made by the trocar.

Another observation concerned a voluminous umbilical hernia in a woman 65 years of age, which had been strangulated for some hours. No chloroform was given, on account of advanced disease of the heart. The tumor was partially transparent. Puncture was made by means of the trocar, resulting in the exit of a wineglassful of serous fluid. Reduction was obtained by means of taxis, and the operation resulted in recovery.

In this case puncture of the sac enabled reduction of the intestinal loop.—*Gaz. Hebdom.*, No. 51, 1874.

X.

THERAPEUTIC NOTES.

NEW METHOD OF ADMINISTERING RAW MEAT.—Raw meat is a very repulsive medicinal agent, under what form soever it be given to invalids. The solid form is by no means advantageous, and its administration is impracticable with young children and convalescents. By M. Yvon's process, a product is obtained which may be administered in either a solid or liquid form. He takes of raw beefsteak, 250 parts; blanched sweet almonds, 75 parts; bitter almonds, 5 parts; white sugar, 80 parts. The almonds are first blanched, and then pounded up with the meat and sugar in a marble mortar, so as to obtain a homogeneous paste. To obtain a nice-looking product, and to retain at the same time the few fibres which may have escaped the action of the pestle, this paste may be reduced to pulp. When it has undergone this process, it is of a pale pink color, and has a very agreeable flavor, not in the least like raw meat. It will keep without change for some time, even in summer, if it be placed in a cool, dry place. If it be desired to give it in a liquid form, it will be enough to dilute a certain quantity of it with water, according to the degree of fluidity required. The emulsion may also be prepared at once, as follows: raw meat, 50 parts; blanched sweet almonds, 15 parts; bitter almonds, 1 part; white sugar, 16 parts, are all pounded in a mortar as in the first formula; the quantity of water needed is added by degrees; and all is then passed through a sieve. Whichever mode of preparation be adopted, the emulsion will keep for at least four-and-twenty hours; and when it separates, at the end of that time, a slight shaking will re-establish the suspension. Some yolks of eggs will make this emulsion more nourishing (*Journal des Connaissances Médicales*). M. Taillier, the head apothecary at the asylum of Quatre-Mares-Saint-Jon, employs the following preparation for the insane patients to whom it is necessary to administer raw meat (*Répertoire de Pharmacie*): grated raw meat, 100 parts; powdered sugar, 40 parts; wine, 20 parts; tincture of cinnamon, 3 parts. The sugar is incorporated with the raw meat in a marble

mortar; and then the wine and tincture are added. A mixture like marmalade is obtained, having an agreeable flavor, and possessing all the requisites of a tonic and revivifying diet. This preparation has many recommendations, though it does not possess all the advantages of the one recommended by M. Yvon.—*British Medical Journal*.

KOUMIS.—The *American Journal of Pharmacy* gives the following directions from an Oriental source:

A certain proportion (one-third) of koumis is poured, together with (two-thirds of) fresh mare's milk, into a clean wooden vessel resembling an ordinary English churn, and there left for from six to eighteen hours, according to the degree of (alcoholic) strength that is required. During this period it is from time to time subjected to a churning process, with the object of keeping up and stimulating the process of fermentation. Herein consists the chief art, and whatever secret there may be in koumis-making is to know the exact amount of churning required; for, although a certain amount is requisite, it must be suspended at the point where curds or butter would be formed. Habit and practice alone teach this to the koumis-maker. After this fermenting process, stimulated by the occasional churning, has lasted a certain time, say six hours, a portion of the contents of the churn is drawn off, and this constitutes the weakest kind of koumis, say koumis of the first degree of strength. The remainder in the churn is subjected to a further period of similar fermentation and churning, say for another six hours, and then the churn is again tapped, and koumis of the second degree of strength is the result. Then another period of, say six hours, of a similar process, for what still remains in the churn, and this, when drawn off, constitutes koumis of the third degree of strength. It will be observed that the difference in the degree of strength of the koumis consists in the different amount of fermentation to which it has been subjected. The strength of the koumis ought to be graduated according to the requirements of different patients; and this is a matter of some importance in the case of invalids. As soon as the koumis is drawn off, it is poured into ordinary quart bottles, made with extra strong necks, corked down and tightly strung; for, containing as it does large quantities of carbonic acid gas, it is subjected to the explosive accidents of all such liquors. Indeed, the inexperienced koumis-drinker, on opening a bottle of koumis for the first time, if he is lucky enough not to lose his eye by the explosion of the cork, will most undoubtedly be soured all over by the frothing liquid.

CRAYONS OF IODOFORM IN THE TREATMENT OF UTERINE MALADIES.—M. Gallard prescribes crayons of iodoform which may be allowed to remain in the cavity of the neck of the uterus, being retained in position by means of a tampon of cotton. These crayons are used with advantage in cases of superficial ulceration of the neck which has invaded the cavity. The following formula is given:

R Iodoform, in very fine powder, 3iiss;
Gum arabic, finely powdered, gr. viiss.

Sufficient mucilage to make into a pilular consistence. Divide into ten cylinders each about one inch long; dry in the air for twenty-four hours. Each crayon contains a little less than a grain of iodoform. These cylinders are hard and resistant; they may be divided into morsels without breaking.

They become disintegrated in the open air, and much more rapidly in the uterine cavity. In order to preserve these crayons, they should be sealed in a dark and airtight bottle.

IN SEVERE ASTHMA.—Inject five grains of chloral subcutaneously, in twenty minims of water.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, FEBRUARY 6, 1875.

EDITORIAL.

HEIDENBLUT.

THIS young man, our readers may remember, was, after some delay, recently executed for murder. The course pursued by Governor Hartranft in this case has been so eminently just and proper that it deserves to be mentioned in terms of the highest commendation.

Shortly after the trial, Heidenblut's counsel, suspecting that he was not quite sound in mind, requested a gentleman having some experience in mental diseases to examine into his mental condition. After an examination as thorough as could be made under the circumstances, this gentleman came to the conclusion that there was some ground for the suspicion of insanity,—that form of it which occurs in what the French call *épilepsie larvée*. This suspicion, it must be understood, was founded on his own story, which, owing to his dulness of intellect and his inability to speak a word of English, might, without any intention to deceive, have conveyed an impression not strictly correct. The expert, in transmitting to the Governor the minutes of the examination (for every question and answer had been written down), together with a letter giving the impression it had made on his own mind, suggested the propriety of delaying the execution, and, after a while, subjecting the prisoner to the examination of a commission of experts.

The execution was delayed in accordance with this suggestion, and a commission consisting of five eminent physicians—one of whom did not serve—was

appointed to inquire into his mental condition. They failed to find any substantial reason for doubting the prisoner's mental sanity, and the Governor accordingly issued at once the warrant for his execution.

We desire to call attention to the action of Governor Hartranft as peculiarly just and fit; evincing a proper feeling of humanity on his own part, a due respect for the reasonable doubts of others, and a judicious deference to the light of medical knowledge. We hope that the effect of this example will be such that the public will hereafter be spared the spectacle of men of doubtful sanity hurried off to an ignominious fate, the result of their misfortune rather than their fault.

CREMATION appears to be gaining practical favor. The body of the wife of a medical man was recently reduced to ashes semi-publicly in Dresden. The Paris correspondent of the London *Lancet* describes the scene as follows:

"In the midst of Siemens's manufactory had been erected a sort of funereal chamber, profusely ornamented with flowers, and in the centre of which was to be seen the coffin of the deceased. After a short and appropriate allocution from Siemens himself, the clergy having refused to attend, the body was pushed into the oven, and the iron door of the oven closed. A current of air, heated to the utmost degree, was let into the oven, and enveloped the delicate body of the woman, as could be seen through the iron gratings, with waves of fire vibrating distinctly and burning with a crimson light. It was not a thick smoking flame, causing swelling and distention of the body, but a real process of desiccation, extraordinarily rapid, producing evaporation of the chemically combined water, then heating the body, causing it to become red-hot, and afterwards white-hot, and finally to fall to ashes. In all this there was nothing offensive to the smell or hearing. There was nothing in all that was seen through the iron gratings to shock the feelings of the woman's friends, except perhaps the unusual sight of a human body being reduced to ashes. In a short space of time the whole process, during which the liver and lungs seemed especially to resist, was terminated, and yesterday the ashes were gathered with suitable solemnity and confided to an urn."

So long as Europeans are foolish or wicked enough to buy "bogus diplomas," and their governments weak enough to allow their subjects or citizens to practise medicine upon such certificates of merit, so long will American or European scoundrels furnish the desideratum. If there is a demand for any devilish invention, the devil will always furnish manufacturers. The receiver is as bad as the thief.

The trade cannot be stopped except by cutting off the demand, which in this case it would be very easy to do. We notice, therefore, with great satisfaction, that a Mr. Stoker has been sentenced in Scotland to imprisonment for practising medicine upon the authority of two diplomas granting a title of M.D., one from the Livingstone University in America, the other from the Edinburgh University of Chicago, the latter having been granted for a fee of fifty dollars by one Dr. Robertson, without any examination.

MADAME ANDRÉ has received from the examiners of the Montpellier School of Pharmacy their diploma, which qualifies its possessor to practise the art in France.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 25, 1874.

The President, Dr. WASHINGTON L. ATLEE, in the chair.

DELIVERY AFTER DEATH—LIFE OF A SIX-MONTHS' FŒTUS.

DR. M. O'HARA remarked that he had been engaged to attend a lady in confinement, who had phthisis; the symptoms were advancing quite rapidly when he ceased to attend her. He noticed her death in the *Ledger*, and, on calling, learned that another physician had attended her, and that he had prognosed that she would be carried away, as she was, by sudden hemorrhage. Subsequently, at the request of the clergyman, another physician was called, who opened the uterus, and an eight-months' fœtus with signs of life was baptized. He learned from the physician that the operation was performed an hour and a half or two hours after the death of the mother. The fœtus gasped three times, and was duly baptized by the clergyman. A friend of his states that he was awaiting the death of a woman under similar circumstances, but, being called about forty-five minutes after, he did not think it proper to interfere. The Catholic clergy insist that it is the duty of the physician under such circumstances to open the womb, and give the child a chance for life and baptism, even if forty-eight hours had elapsed. They give Cangiamilla as authority, who, in his *Sacred Embryology*, affirms that in the space of twenty-four years twenty-one children were saved at Montereale, thirteen at Girgenti, and that the Cæsarean operation was performed, under these circumstances, twenty times at Syracuse in the course of eighteen months. Cases of suspended animation at birth are recorded. And all practitioners are familiar with cases in which artificial respiration, cold water, etc., apparently bring about activity in the course of twenty minutes or a half-hour.

Rigaudeau (Meigs's Velpéau, p. 509) relates that he was sent for, two leagues from Douai, to see a woman whose labor had excited great uneasiness; when he arrived she was believed to have been dead for two hours. Instead of opening the abdomen without an examination, he explored the genital organs, found the pelvis well formed, and proceeded to turn and deliver the child by the feet; it was born in a state of apparent death, but with great exertion was brought to life in about two hours. The limbs of the mother pre-

serving their suppleness, he forbade them to bury her until the abdomen should have turned green. After a few hours this woman recovered so completely from her insensibility that she came herself, four years afterwards, to inform Rigaudeau that she was not dead. The *Lex Regia* of Numa Pompilius ordered the physicians of that period to open the bodies of all women who died pregnant, with a view of preserving citizens to the State. A decree of the Senate of Venice, bearing on this matter, 1608 and 1721, ordered severe penalties on those who should operate upon a person supposed to be dead without the same degree of care as if she were actually living. A law of the King of Sicily in 1749 inflicted the penalty of death upon physicians who should omit to perform the Cæsarean operation upon women who had died in the last months of pregnancy. Flajani, Veslingius, and several other authors relate cases similar to that of the Princess of Schwartzenberg, who died at Paris in consequence of a burn, could not be opened until the next day, and the fœtus was found, notwithstanding, to be living. In a case of death-burn, Dr. O'Hara had awaited the moment of death, and, without difficulty, delivered per vaginam a five-months' fœtus. It was thought to have life, and it was baptized. He would think, with Velpéau, "it is very useless, no doubt, to think of preserving the life of a fœtus previous to the end of the eighth month, but among Catholics there is a desire at least to baptize, and the operation should be performed, in fact, if the woman has passed through one-half of the period of pregnancy."

Dr. WASHINGTON L. ATLEE said he had no experience on the subject referred to by Dr. O'Hara. It is well known, however, that after the death of the mother the uterus will force the fœtus into the world; but he had never heard of an instance of the child having been alive under such circumstances. With regard to the viability of the fœtus during different periods of the progress of gestation, and its capacity of maintaining a separate existence, Dr. Atlee mentioned an instance which occurred in his practice in December, 1845. By the closest calculation the period of gestation had not exceeded six months. A very small child was born. It being very flaccid and apparently lifeless, it was rolled carefully in a cloth and laid to one side. After having recovered the placenta and fixed the mother comfortably in bed, he was asked the sex of the child. Unwrapping it, he noticed a slight gasp, which was followed by others. It was now laid in a bed of cotton wadding, and its grandmother took charge of it, feeding it by dropping milk into its mouth from the point of her finger. It was kept in this bed of cotton, and fed in this way, for two weeks, when it was first washed and dressed. At that time it weighed two and a fourth pounds. It continued to live, and is now a beautiful and vigorous lady.

Dr. H. Y. EVANS then read a paper on "Localized Rest in the Treatment of Pulmonary Affections."

Dr. ESHLEMAN remarked that one result of bandaging the chest referred to by Dr. Evans in his valuable paper was not quite clear to his mind.

This was that it "lessened the frequency of respiration." If we limit the capacity of the lungs by placing at rest the intercostal muscles, compensation would seem to require a more frequent movement of the diaphragm.

Dr. WELCH said he had no experience in the treatment of pulmonary affections by rest, as recommended by the author of the paper, but looking at the question from a physiological stand-point he doubted that the lungs could be placed at rest to any considerable degree by the means suggested. The respiratory act, as is well known, is carried on not by the muscles of the thorax alone, but also by the diaphragm. If we

diminish the action of the former, as the paper proposes, then the latter will take on increased action, and in this way compensate for the diminished thoracic respiration. The author of the paper will recollect witnessing an experiment made not long since to show that this is true. The experiment consisted simply in applying a roller bandage tightly around the chest, when, on measurement, it was found that as thoracic respiration diminished, abdominal respiration increased. This proves that it is doubtful whether the means proposed will place the lungs at rest to any appreciable extent. If, however, it were possible to do so, would it not, in the treatment of pleurisy, increase the liability to pleuritic adhesions?

Dr. DUNBARR had tried the plasters on more than one occasion, but, owing to their being freshly or badly made, they had slipped, irritated his patients, and failed. He has since been depending upon a compress, gored to fit the chest, with ties or pins, and pads for seats of pain; the whole supported by broad bands over the shoulders; special pressure being made over seats of pain.

In one case hemorrhage was arrested, cough subdued, and pain relieved in a marked degree. Was yesterday called to a case of hæmoptysis. Patient had long complained of pain in right breast, and had hemorrhage before. To-day we have no hemorrhage, no pain in breast, and patient declares himself comforted and grateful for the bandage.

In answer to the question, How can strapping the breast prevent the irritation of the diseased lung during respiration? the doctor said that different parts of the lung receive air independently, and at successive intervals. In ordinary respiration the upper part of the lung, and that contiguous to the larger bronchi, being more free of access, are first filled, and do the ordinary moving work of respiration, the lower and deeper parts seldom being called into action. Now, if the upper part or any part be diseased and painful on motion, by proper compression the motion will be arrested and the part kept at rest, friction of the diseased surfaces prevented, and the tendency to pain, cough, and hemorrhage lessened, while the object of respiration will be accomplished by bringing into play those portions of the lung usually at rest.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

WEDNESDAY, May 6, 1874.

DR. JAMES H. HUTCHINSON read a paper on *Lymphadenoma*, of which the following is an abstract:

"W. M. L., æt. 19, unmarried; was admitted into the medical wards of the Pennsylvania Hospital, January 26, 1874. On February 1, the following notes of his case were made:

"The patient's mother died of phthisis, after having suffered for many years from enlargement of the cervical glands, but with this exception there seems to be no tendency to hereditary disease in his family. He has always been temperate, and has never had any form of venereal disease, or any serious illness before the present one began, about six weeks before his admission. At that time he complained of a feeling of soreness in the front of the chest, and in the muscles of the shoulders and arms. He did not, however, have actual pain until several days subsequently, when he became aware of a sensation of constriction at the base of the thorax. He also observed that his lower extremities were weak and numb. This symptom increased in severity until he was unable to walk except with assist-

ance. The day prior to his admission he became absolutely paraplegic, and lost control over his bladder and rectum. He has never had any dorsal pain or any pain in the extremities, but has occasionally suffered from twitchings of the muscles. Upon inquiry it is discovered that he had at one time (some years ago) enlargement of the glands on the left side of his neck, but the enlargement of those on the right side, which is now apparent, was not observed until May last. Soon after his illness began he noticed a swelling over the upper bone of the sternum, which has gradually increased in size, until it is now as large as half an orange. It has been from the first tender to the touch.

"Upon examination the patient is found to have complete paralysis of motion and sensation of all the parts of his body below the thorax. He complains also of a feeling of constriction about at the level of the line separating the sensitive from the paralyzed parts, but he has no pain or tenderness along the dorsal vertebræ. There are, moreover, no contractions and no spasmodic twitchings of the muscles, but there is a notable increase of reflex movements. The palsied muscles respond fairly well to an induced current of moderate intensity, but feebly so to the galvanic. On the right side of the neck there is a mass of much enlarged glands, firm to the touch and not tender. Upon closer examination it is possible to trace the outlines of several glands which appear to be loosely bound together. At the inner part of the upper eyelid there is a tumor, due, probably, to an enlargement of a Meibomian gland. In addition to this and to the tumor over the upper part of the sternum, already referred to, there are numerous tumors, varying in size from a millet-seed to a walnut, distributed over the body, especially on the trunk. They are, for the most part, situated beneath the skin, and are hard to the touch; a few, however, project as pedunculated appendages. The axillary and inguinal glands are slightly enlarged, but free from tenderness. No enlarged glands or tumor of any kind can be felt within the abdominal cavity. Neither the spleen nor the liver is enlarged. The patient is very pale and emaciated; his tongue is slightly furred, his appetite is poor, and the nails of his fingers have a decidedly bluish color. The urine contains an excess of the phosphates, but no albumen. Its specific gravity is 1020. His blood, upon being examined microscopically, is found to contain a slight excess of white cells. No disease of his lungs can be detected, but it is impossible to make a satisfactory examination of them in consequence of the pain he suffers when moved. The heart is healthy.

"Feb. 20.—The patient has become very anæmic, and more emaciated than when the last note was made. Reflex movements can still be excited. The small tumors beneath the skin of the trunk, arms, and legs have increased in size, and this is also true of the large one over the sternum, but it is less tender to the touch than before. A few small nodules can be felt beneath the skin of the face; in fact, there is no part of the body where some cannot be detected upon close examination. They are, however, less numerous on the posterior aspect of the body than in front. The feeling of constriction around the body at the base of the thorax still continues, and gives rise to much suffering. The pain is much increased upon movement."

Daily notes taken after this show that the disease progressed steadily to a fatal termination about five months after the manifestation of the first serious symptoms, and a year after the enlargement of the cervical glands. Just before his death his urine became bloody and ammoniacal, but he preserved possession of his intellectual faculties, and was cheerful. Hypodermic injections of morphia were freely given, and gave him much relief. The temperature-record showed a slight tendency to a febrile exacerbation at night.

At the autopsy the tumor over the sternum was found to penetrate the liver, and to be nearly of the same dimensions beneath as above. Twenty tumors, the largest the size of a small filbert, were counted scattered over the surface of the brain, and closely resembling brain-substance in appearance. A tumor was found completely surrounding the bodies of the sixth, seventh, and eighth dorsal vertebræ, and continuous with this through the intercostal spaces were similar growths, occupying the gutters on both sides of the spinous processes. A smaller tumor was found within the canal at the level of the last dorsal vertebra. The lungs contained a large number of tumors, the average size being about that of a large pea. They were seated immediately beneath the surface of the lungs, as well as in the interior. But one tumor was detected taking its origin from the parietal pleura. Heart was normal. Small tumors were scattered over the peritoneum. Mesenteric glands were enlarged and prominent. Liver was healthy. The connective tissue surrounding it held in its meshes numerous small tumors. Microscopic examination of the tumors revealed that they consisted of a fibrous stroma, containing numerous large, rounded, oval, and somewhat angular cells, and arranged like that of a lymph-gland.

The freedom of the liver and spleen from deposits and enlargements, as well as the slight involvement of the axillary glands, were both unusual. The most remarkable feature was the paraplegia, which was complete. The cause of the disease is very doubtful, as in almost every other reported case. An examination of the blood early in the disease showed a slight excess of white corpuscles. No treatment has been shown to have the slightest influence in arresting the course of this disease.

An interesting analysis of fifty-eight cases of lymphadenoma was then given by Dr. Hutchinson, together with a copious bibliography of the subject.

GLEANINGS FROM OUR EXCHANGES.

PARACENTESIS THORACIS (*The British Medical Journal*, Dec. 12, 1874).—Dr. John Richard Wardell summarizes as follows the morbid states and the positive and negative signs demanding the operation of paracentesis thoracis:

1. In all cases in which inspection and the physical signs give evidence of a large quantity of fluid: when there are symptoms of compression of the lung, and there is manifest cardiac displacement.
2. When there are urgent dyspnoea, an irregular pulse, and threatening of orthopnoea.
3. When the affected side is smooth and rounded, and the intercostal spaces are effaced or protrude; when measurement proves bulging; when the dulness in the chest is complete, or demarcated and absolute; when there is abolition of tactile fremitus; when there are bronchophonic voice, tubular breathing; and absence of breath-sound; when the patient can only lie on one side, or in diagonal position; and when there is the Hippocratic sign of succussion.
4. When the exploratory needle proves the fluid to be purulent.
5. If the heart be pushed from its normal situation, and the apex-beat be substernal or beyond the right sternal edge, or if it be thrust towards the left hypochondrium, or if it be lost; when it becomes presumptive that the organ has been driven inwards and backwards; and when on the one side the liver depends abnormally into the abdomen, and when on the other side the relaxed and down-pressed diaphragm so displaces the spleen that its free edge can be felt.

6. When half the thoracic cavity is filled, and a month or so shows no proof of absorption, the longer the delay the less are the chances of expansion.

7. In those exceptional cases of double pleurisy when both cavities become half filled with effusion, and dyspnoea shows the lung-space to be dangerously encroached upon.

8. In pulmonary phthisis, when the accumulation of serous or sero-purulent secretion causes distress, and when the other lung assumes the symptoms of bronchitis or pneumonia, the operation should at once be performed.

9. In mechanical hydrothorax, it may be had recourse to, though with no object to cure, but with merely a view for a time to prolong life and to aid the action of medicinal remedies.

10. In children, whose chest-walls are thin, and in whom the white tissues are more developed and confer greater resiliency to the thoracic parietes, and whenever there are certain evidences of fluid, it should without delay be evacuated.

11. In hydropneumothorax, it may be generally with safety and benefit employed.

12. Pointing externally should never be waited for.

13. Under certain circumstances, repeated tapings are required.

PHYSIOLOGY OF THE NERVOUS SYSTEM (*New York Medical Record*, December 1, 1874).—Dr. Seguin advances the following propositions:

1. Sensation and perception are executed by means of paths which decussate almost horizontally in the spinal axis; the conduction being by the gray matter, not by the white columns of the cord; coarse sensibility with doubtful consciousness has its seat in the pons Varolii; perfect perception and appreciation are possible only with the help of the cerebral mass.

2. Motion is executed through motor impulses, which, starting from the opto-striate bodies (from cortex to cerebrum also?), traverse paths which decussate almost opposite the motor nerves as far down as the lower margin of the medulla oblongata, where the paths for the trunk and limbs decussate in a bundle, to remain, below this point, in that half of the spinal cord whence arise the nerves going to the muscles.

3. Reflex action is the result of a transformation of an irritation from the periphery into nervous force by a nerve-cell, transmitted centrifugally by a second nerve. That all nervous phenomena are of reflex mechanism is not to be too positively denied.

4. Co-ordination is no faculty, but a function of every portion of the motor tract of the spinal axis from the origin of the third cerebral nerve down.

CAMPHORATED PHENOL (*London Medical Record*).—Bufalini asserts that when equal parts of carbolic acid and camphor are dissolved in alcohol, in about twelve or thirteen hours there rises to the surface of the solution a yellowish stratum of oily appearance: it does not mix with the liquid or water, nor is the camphor contained in the alcohol precipitated by water. This compound he calls camphorated phenol, and, after considerable experience, makes the following statement as to its therapeutic employment:

1. Camphorated phenol produces the same effects as carbolic acid, but is less dangerous. It may be used both externally and internally,—e.g., in enteric fever and other infectious disorders.

2. It has the power of modifying unhealthy wounds, and of destroying the parasites which are present in certain diseases, as septicæmia, typhoid forms of fever, etc.

3. The medical use of camphorated phenol is to be preferred to that of carbolic acid, as the former does not present the disadvantages of the latter.

4. Camphorated phenol, when applied to the wounds, does not irritate them, or act as a caustic or disorganizing substance on them; and may be used in large doses without producing symptoms of poisoning.

MISCELLANY.

DOCTOR-FACTORIES.—“There must be much admirable medical teaching in the United States. The account of American surgery given lately in our columns by Mr. Erichsen, and the highly-cultivated intelligence and information of many of our American visitors, are proof enough of this. There are, too, many admirable schools from which reliable diplomas emanate,—such as the Harvard University, Boston; Yale University, Massachusetts; the New York University; the New York Columbia University; the Bellevue Hospital; the Philadelphia University (*sic*); the Virginia University; the Louisiana University; the Michigan University; etc., etc. But there would appear to be, in the States, a most deplorable multiplication of colleges and schools purporting to teach medicine and to grant diplomas, which can be no real guarantees of education to the public, and which bear no comparison even with the lowest of our British qualifications. Every State in this matter legislates for itself, and the result is, as we have said, a terrible multiplication of ‘doctor-factories.’” — *London Lancet*.

THE modest gentleman at the head of the *Clinic*, who claims so pertinaciously to be the ablest editor in this country, takes the editor of the *Times* to task very severely for stating, in reply to his assertion that the *Clinic* offers more readable matter than any other journal in the country, that the *Times* contains nearly twice as much matter as the *Clinic*, affirming that it has in it only three pages a week or twenty-five per cent. more than has his periodical. The truth is, the *Times* has four and one-half pages more, and uses a smaller type. If our truth-loving critic will take the trouble to count the lines, he will find that the *Times* of the week of his article contained considerably over fifty per cent. more than did the *Clinic*. It is generally considered allowable for a publisher to state what he pleases about his wares, but this vaunting of his own productions by an editor does not seem to us very good taste.

LIFE AND DEATH IN PARIS AND LONDON.—The municipal statistics of Paris just published show that from a population of 1,851,792, there were born in 1873 55,905 children,—28,244 boys and 27,661 girls,—being an average of 153 births a day, and a proportion of thirty children to every 1000 of the inhabitants. London, of which the population (3,400,761) is not double that of Paris, shows more than a double amount of births in the same year. There were 41,732 deaths in Paris in 1873, comprising 21,380 males, and 20,352 females, being an average of 114 deaths daily, and a proportion of 22.54 to every 1000 of the inhabitants. Here again London contrasts favorably with Paris; the

number of deaths registered in 1873 having been only 76,634 in a population of more than double the amount of that of Paris.—*London Medical Record*.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Whilst examining, the other day, a case of severe lacerated wound of the scalp, where I had reason to fear from the symptoms that though no fracture with depression of the skull existed, yet a fissure or a stellated fracture might, a paper by Assistant-Surgeon —, U.S.A., on the use of an infant's ring in preventing pus from being forced into the surrounding healthy tissues by Esmarch's bandage, while excising dead or carious bone, came to my recollection, and I found that, by applying one of these rings round the wound, I could examine the part of the skull laid bare much more completely and satisfactorily, as there was no oozing of blood from the edges of the wound.

If this suggestion has been made before, I beg to say that, having been travelling and separated from my books and papers for some time, I have not seen it, and now offer it as a natural and simple deduction from the suggestion of Assistant-Surgeon —, U.S.A.

Yours faithfully,

JAMES M. JANES, M.D., M.R.C.S.E.

DENVER, COLORADO, January 5, 1875.

PHILADELPHIA, 27 January, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Permit me to correct an error which appears at p. 270 of the current volume of your journal.

The case whose history begins with the words “He was called to see a patient August 1, 1873,” was reported by Dr. D. M. Barr, and not by

Yours, very respectfully,

WILLIAM GOODELL.

OBITUARY.

EXPIRED, in New Berlin, Pennsylvania, January 19, 1875, Dr. Joseph R. Lotz, in the seventy-sixth year of his age.

Dr. Lotz attended lectures at the University of Pennsylvania when such Professors as Physick, Hare, Chapman, and others gave celebrity to that institution. Until the infirmities of age compelled him to “take off the harness,” he was ever diligently engaged in the labors of an immense practice, in which he attained great eminence. He was a skilful surgeon, a bold and brilliant operator, and his services in this department were often demanded far and near. He was the inventor of an instrument for the cure of artificial anus, well spoken of in their lectures by Professors Gibson, Smith, and Mütter.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held at the hall of the College of Physicians, Wednesday, February 10, at 8 o'clock P.M.

Dr. George Hamilton will read a paper: subject, “Remarks on the Diagnosis, Prognosis, and General Management of Typhoid Fever.”

The medical profession in Philadelphia are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 26, 1875, TO FEBRUARY 1, 1875, INCLUSIVE.

BAILY, J. C., SURGEON.—Granted leave of absence for one month, provided he furnishes a suitable substitute during his absence. S. O. 11, Department of the South, January 27, 1875.

BACHE, DALLAS, SURGEON.—Temporarily assigned to duty at Baltimore, Maryland, as Attending-Surgeon and Examiner of Recruits. S. O. 16, A. G. O., January 26, 1875.

JACKSON, D., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Concho, Texas. S. O. 10, Department of Texas, January 18, 1875.

SEMIG, B. G., ASSISTANT-SURGEON.—Instead of complying with S. O. 124, of 1874, from these Headquarters, to report to the Commanding Officer of the Presidio of San Francisco, for such duty as he is able to perform. S. O. 10, Department of California, January 23, 1875.

The Medical Examining Board in session in San Francisco, California, is dissolved, and the members thereof will join their proper stations. S. O. 17, A. G. O., January 28, 1875.

SATURDAY, FEBRUARY 13, 1875.

ORIGINAL COMMUNICATIONS.

ON THE SPASMODIC DISEASES OF STUMPS.

BY S. WEIR MITCHELL, M.D.

I HAVE had very numerous chances of studying the curious and most interesting maladies of stumps, and have often wondered that no surgeon has been at the pains to write a monograph on stumps and their diseases. I have attempted to do something in this direction in my book on "Injuries of Nerves," but far more remains to be done in a purely surgical point of view. To the mere operator, to the physiologist and psychologist as well as to the physician, these maimed limb-remainders are full of interest. Such a thing in fact as a perfectly healthy stump, which is normally sensitive, does not twitch, calls up no memory of lost toes or fingers, and is not affected by weather, I might almost assert does not exist. The stump, in fact,—and I may say here that we have no technical name for it, and one is wanted,—the stump is throughout life a pathological part. It has a pathology rather than a physiology, so remarkable are the conditions of its being,—so rare is it to find it quite like other parts.

Among the peculiarities of stumps is a liability to spasm of the muscles, which assumes at least three distinct forms, two of which I have already described. One of these is the chorea of stumps,—a strange affection (see "Injuries of Nerves," p. 364), in which the limb is kept constantly in the most active motion. Since I first delineated this disease from the case of Col. P., who is still its victim, I have met with other examples more or less remarkable, but none so striking as his. I am satisfied that *early* section of the nerves would cure it; but so far I have had no chance to test the value of my belief.

The second form of spasm is usually but not always connected with pain in, or, rather, referred to, the lost part, and with sense of spasm in that part. There is a quivering and twitching here and there in the severed muscles of the stump. It comes and goes, in some is rarely absent, in others is seen only when there is pain, and in all is worse when the watery winds prevail. As to this point I have long ceased to doubt, and lately one of my patients has most absolutely confirmed my belief. This gentleman has kept a record, reduced to curves, of the thermal, barometric, and hygrometric states of the air, of the winds, and even of the ozone, and by following the lines of the pain-curve it is possible to see just what atmospheric states favor in him the condition—pain. This curious and valuable record, kept by a man of great accuracy and remarkable scientific endowments, I shall before long make public. Suffice it now to say that it proves most perfectly the capacity of the stump to indicate by pain and spasms the approach of winds which bring rain, and not alone the east wind, which some of my patients insist is the only one thus competent.

In some cases the twitching is only in one or more muscles, not in all, and, when limited, is in certain cases useful, because, as the neuro-muscular distribution is rarely anomalous, and as the seat of pain in the lost part is not always distinct, we can tell by the muscles concerned in spasm what main nerve-trunk must be cut to relieve the pain.

As a more innocent malady, without pain as its companion, this local twitching of stump-muscles is very common. I have said that there were three forms of stump-spasm; but there is one more which is excessively rare, and is apt, when it does come, to follow some sudden injury to a tender stump.

This form of spasm is not so much in the stump as in the muscles of the same limb which are a little remote and have not been severed by the knife. It consists in a single violent tonic contraction three or four times a day,—a spasm which is like a cramp, and is horribly painful. I have seen this but twice. In one case the deltoid was concerned, and in another the short intra-pelvic flexors of the thigh. The attacks in both followed a blow; in the first case on the stump, in the second on the groin (a thigh-amputation high up). In both, relief was obtained by ice-dressings and leeching.

My last form of stump-spasms is altogether peculiar, nor can I find it described elsewhere; but, as I have said, this is not surprising, because the surgical literature of stumps is disgracefully small and incomplete.

In some cases of myelitis, in some instances of spinal sclerosis, and in rare hysterical conditions, the affected limb is liable to become suddenly and often most violently convulsed, the spasms in certain instances extending to the rest of the body, and in others remaining confined to the member in which they began. These attacks appear in some cases to be spontaneous, or, rather, to be discharges of force from motor ganglia in abnormal states. In other examples they are brought about by any cause which, like a blow or tickling, operates from without through the afferent nerve-tracks. This description applies equally to the stump-spasms I am about to describe.

I saw the first of my cases during the war, and shall describe it from memory, as I have mislaid my notes.

A sergeant lost his leg from a Minié-ball, which necessitated an amputation above the right ankle. At least three months later, he began to have pain in the stump and absent foot. It was not severe. The pain was associated with twitches of the stump-muscles. About nine months from the date of amputation he received a fall on the stump, bruising it badly. Some days after, while washing it with cold water, it became agitated, and finally convulsed, the extensors and flexors acting irregularly. The attack lasted a few minutes, and was the first of many such, which increased in severity until any rough touch brought on a fit that at length resulted in twitches of the right pectoral muscles; but at no time were there any marked cerebral symptoms. The patient soon after passed from under my care. Among the hundreds of stumps I have seen since, I have met with a number of like cases.

A remarkable example was seen in a gentleman æt. 50, whose right hand was injured, and, a week later, removed at the lower third of the fore-arm. He was never free of pain, or of the consciousness of the presence of the absent part, and about six weeks after its loss began to have slight attacks of stump-spasm. They increased in severity, and were usually worst in wet weather. The bad attacks began with slight twitching, which, increasing in severity, within a minute involved the fore-arm and arm, and even the deltoid, pectorals, and trapezius. On one occasion the face, he stated, was distinctly drawn to the right, and he had a slight sense of disturbed equilibrium. As his health improved,—and it had been very feeble,—the fits lessened in number, and were less grave. Prolonged use of dry cold to the stump in rubber bags, with hypodermic injections of atropia in the stump, iron, and cod-liver oil finally relieved him, and he has now, I believe, been for a year free from any bad fit. In another case, an officer who lost his thigh at the lower third had neuralgia and stump-spasms, chiefly owing to a long bout of obstinate ague. The pain came first, and when present the least careless friction or blow on the stump sent it off into a furious shaking fit, which much increased the pain. The cure of the ague and a long residence in a mountain climate relieved both troubles, but, I believe, did not quite cure either.

Sometimes the fits are altogether painless. I was examining, two weeks ago, a stump, when suddenly it went off into a violent and almost grotesque series of flexions and extensions, moving so fast that I could scarcely follow with my eye its rapid movements. There was little pain at the time, and this was a type of the more common form of this malady.

It is hardly necessary to describe it further. The attacks are rare in many cases, and I have seen it pass beyond the limb in but two. Nearly always it occurs in stumps which are painful or tender. It lasts but a few minutes, and, like some of the spinal epilepsies of Brown-Séquard, can often be arrested by holding the limb or forcibly flexing it. It almost depends in a few cases on loss or lowering of general tone of health, and in these gets better as the depressing causes are remedied. In others it is found to co-exist with perfect systemic health. I have not found that bromides relieve it, but cold to the stump and atropia-injections act better. I presume that nerve-section used early would be effectual.

I never saw a case arise very soon after amputation. I suspect—indeed, I believe—that neural irritations resulting in inflammation or sclerosis of the trunks are the peripheral exciting causes, and that these finally act on their related groups of motor ganglia to produce in them an over-readiness to discharges of motor nerve force. It has been shown that amputations bring about in the spinal cord distinct sclerotic or atrophic conditions which may possibly have a share in the results described; but the fits sometimes occur too soon after amputation to admit of this explanation, and that of peripheral irritation seems the more probable one.

AN OBJECTIVE NOISE IN THE EAR, ACCOMPANIED BY SPASMODIC RETRACTION OF THE MEMBRANA TYMPANI AND OF THE VELUM PALATI.

BY CHARLES H. BURNETT, M.D.,

Aural Surgeon to the Presbyterian Hospital, and Surgeon-in-Charge of the Philadelphia Infirmary for Diseases of the Ear.

I DESIRE to place on record a short account of the above-named curious affection, occurring in a Japanese lad 18 years old, sent to me by Dr. R. M. Girvin, of West Philadelphia. The patient came under my care for treatment of a chronic suppurative inflammation of the left middle ear, with perforation of the membrana tympani, the result of acute inflammation incurred last July by diving in salt water. The patient complained only of the left ear. He did not draw my attention to the right ear, affected by the spasm about to be described, but, while inspecting the right ear for purposes of comparison, I heard distinctly a noise resembling the snapping of the finger-nails, emanating from it. The snapping was most audible when the ear of the listener was placed close to the right ear of the patient, but it could be distinctly heard ten feet from the ear from which it came. It was also heard very distinctly when the ear was placed near the right nostril of the patient. It was not, however, audible in the left ear of the patient, neither by placing my ear on his ear, nor by the use of the auscultation-tube. Inspection revealed a thickened and reddened condition of the right membrana tympani; and the patient stated that he had had, some years previous, discharges from the right ear, and I found that the hearing was defective in it.

The snapping sounds began in it last summer, one week after the acute inflammation in the left ear. At the first examination, November 25, 1874, by simple inspection I could detect no motion in the membrana tympani at each snapping, but in the course of a month, the thickening of the drum-head becoming less, I could detect at each snapping sound a very slight retraction of the drum-head at its antero-superior quadrant. Before I could thus see any motion in the drum-head by simple inspection, I placed a small glass manometer devised by Politzer, with its capillary calibre, one millimetre in diameter, filled with colored water, into the meatus of the right ear, also filled with water, the two columns of water being hermetically joined by an india-rubber stopper on the manometer. The column of water thus brought into contact with the membrana tympani showed a negative fluctuation of one-half millimetre at each snapping sound, thus demonstrating a retraction of the membrana tympani too small to be seen at that time by inspection, but since apparent upon close and attentive inspection. The drum-head moved readily under the Siglé's pneumatic speculum.

The examination of the fauces revealed an elevation and retraction of the velum palati with each snapping sound in the ear and each manometric depression. The negative fluctuation,—i.e., depression in the manometric column,—amounting to one-half millimetre, occurring at each snapping

sound in the ear, was entirely distinct from a very slight positive oscillation in the same column at each cardiac impulse. The latter could not always be discerned.

Deglutition, respiration, and speech exercise a marked influence over the spasmodic condition already described. The patient stated that deglutition and rapid respiration increased the frequency of the snapping noise in the ear, but that when he held his breath, the spasms (in the velum palati) and the snapping noise in the ear ceased entirely, to begin again with renewed respiratory acts. I found, indeed, that so long as the patient held his breath neither he nor I could hear any snapping, nor could I detect any spasmodic movement of the velum; but they all recurred as soon as the patient resumed his breathing. During ordinary respiration I counted twenty spasms in a minute, which appeared to be the average number; but with a voluntarily increased number of respirations the number of snappings and spasms of the velum rose to thirty in a minute. During continued speech no snappings occur.

These peculiar snappings are not in regular succession, nor synchronous with the respirations. Two or three snappings usually occur in quick succession, are followed by a pause, then there are several more, thus completing twenty in a minute. These noises interfered so much with the hearing in the ear where they occurred that the patient, when specially desirous to increase his hearing, held his breath, which, as already stated, would control the spasms. I found by testing with a watch, audible normally sixty inches, that the hearing was indeed influenced by the spasms and their temporary cessation, as the patient had stated; for the watch, audible to him only on contact during the spasms, was heard two inches when they were arrested by holding his breath.

Tuning-forks held before the ear appeared to the patient to rise in pitch at each spasm. The rise in the note was well imitated by the patient. This altered pitch we are prepared to hear of, because at each spasm the drum-head is retracted, and rendered, by this increased tension, more sensitive to high than to low notes, and hence the ear perceives the higher to the exclusion of the lower partial tones of the tuning-forks.

The snapping sounds, but not the spasmodic elevations in the velum, can be arrested in two other ways. By throwing the patient's head back as far as he could get it; the spasms in the velum palati went on with the usual intervals, but neither the patient nor I could hear any snapping.

I could also arrest the noise by pressing my finger firmly against the velum, and pushing it upward towards the pharyngeal opening of the right Eustachian tube. While I could still feel a powerful twitching with the usual intervals of repose of the muscular structures thus pressed upon, all snapping noise ceased.

Pressure upon the left half of the velum palati and mediately upon the pharyngeal opening of the left Eustachian tube revealed no twitching in that region, nor did it influence in any way the

spasms and noises on the opposite side of the pharynx and in the right ear.

Johannes Müller was disposed to attribute all such cases of objective entotic noises, resembling the snapping of the finger-nails, to clonic spasms of the tensor tympani muscle; but Politzer and Luschka, independently of each other, and about the same time (1862), proved conclusively that many cases of such noises previously ascribed to spasmodic twitchings in the tensor tympani were really due to a spasmodic contraction of the muscles of the velum palati, *producing a sudden separation of the anterior from the posterior wall of the pharyngeal portion of the Eustachian tube.*

This hypothesis has been substantiated by cases reported by Boeck,* Schwartz,† Politzer,‡ A. Schrapinger,§ Küpper,|| and others.

In Dr. Küpper's case, the spasms, amounting to one hundred and forty in a minute, were temporarily arrested by pressure at the base of the tongue, and partially relieved—i.e., diminished in frequency—by pressure on the lesser occipital nerve near the insertion of the sterno-cleido-mastoid muscle; but they were in no way connected with the act of respiration or with the circulation.

Moos relates a case of retraction of the membrana tympani with objective noise in the ear, occurring only at deglutition (*Archives of Ophthalmology and Otology*, vol. ii.).

The quality of the objective noise in these cases is universally likened to the snapping of the finger-nails. Its cause is without doubt due to the sudden separation of the anterior from the posterior wall of the pharyngeal portion of the Eustachian tube, and *not to any spasm in the tensor tympani muscle.*

This would seem to be corroborated by the fact that this peculiar objective noise in the ear is accompanied by spasm of the velum palati more frequently than by any other one symptom. The cases where it has not occurred, or where no mention is made of it, are very rare. Positive knowledge as to its absence is gained in only one case (Schwartz, *Arch. f. Ohrenheilk.*, Bd. vi., 1870). Again, the fact that the noise in my case is so distinctly audible at the nostril of the affected side, seems to indicate that its cause lies in the nasopharyngeal space at the mouth of the Eustachian tube, and not purely in the tympanic cavity. Doubtless the retraction of the membrana tympani seen in some of these cases is due to a spasm of the tensor tympani.

Treatment.—The whole number of these cases is so small, and the individual experience respecting them is so limited, that our knowledge respecting the therapeutics of this variety of aural disease is of course very meagre. So far as we can glean an opinion from what has been written concerning the treatment of these cases of clonic spasms, the induction current has effected the only apparent relief and cure (Schwartz, Politzer, and Boeck). In my

* Archiv f. Ohrenheilkunde, Bd. ii.

† Ibid., Bd. ii. and Bd. vi.

‡ Ibid., Bd. iv.

§ Sitzb. der Oestreich. Academie der Wissensch., Bd. lxii. Section 2, Oct. 1870.

|| Archiv f. Ohrenheilk., N. F., Bd. i.

case and in many others the snapping has occasioned so little annoyance to the patient that treatment for it has not been desired, which one is ready to infer from the fact that these cases have usually been discovered accidentally by the physician to whom the patient has applied for relief from other aural troubles.

EXPERIMENTS ON DIGESTION.

BY ROBERT M. SMITH, A.B.,

One of the Assistants to the Professor of the Institutes of Medicine in the University of Pennsylvania.

THE following experiments were made upon the contents of the stomach of a criminal (Heidenblut), previously of good health, who was executed while digesting a hearty breakfast of hard-boiled eggs, bread and butter, and coffee. When his stomach was examined, some two hours after his death, it was found to present the usual redness of the organ whilst digesting, more deeply marked, however, in the great cul-de-sac and along the greater curvature towards the pylorus, the latter being due to the semi-erect position in which the body was placed after death having caused the gravitation of the contents to these parts. Over the portion of deepest redness the mucous membrane was soft and pulpy, and the blood-vessels more apparent than in other places; incipient digestion of the mucous coat had evidently taken place, owing to the action of the solvent juice upon it. The mucous coat, after the organ was emptied, was somewhat plicated from the contraction of the muscular walls. The contents, which nearly filled the organ, were of a grumous consistence, somewhat yellowish in color, and of decidedly acid reaction to test-paper. They contained portions of undigested albumen, and a large amount of glucose as discovered by Trommer's test. Microscopical examination of the contents revealed the presence of numerous oil-globules, granular matter, and a large number of partly broken-up starch-granules; the presence of starch was further certified by its presenting the usual reaction with iodine.

These contents of the stomach were now subjected to filtration in a vessel which had been previously washed with distilled water and tested with nitrate of silver, and found to be perfectly free from all chlorides. Upon the addition of nitrate of silver to the *filtrate* thus obtained, a dense white precipitate was thrown down; but upon adding a small quantity of chemically pure nitric acid, a *considerable* portion of the precipitate was re-dissolved, so, perhaps, justifying the supposition that it was not entirely composed of the chloride of silver, which is perfectly insoluble in nitric acid, but partly of the lactate, or of some other salt of silver which is soluble in nitric acid.

This filtrate, after having shown an acid reaction to litmus-paper, was carefully poured through a chemically clean funnel into a chemically clean glass retort, so that no particles of the fluid could adhere to the neck of the retort and be carried over mechanically in the process of distillation. The

retort was now slowly heated in a sand-bath to a little *below* the boiling-point of the fluid, so as to insure the passage of volatile matters alone into the condenser; by this means—viz., of keeping the fluid constantly in a state of incipient ebullition—it was impossible that any non-volatile salt or matter of any kind could be carried over in the spray of the distilling fluid. After this heat had been kept up for a little less than an hour, there was condensed in the receiver about a drachm of a yellowish fluid of a watery consistence. This distillate showed a distinctly acid reaction to test-paper, and the question now to be determined was whether this acidity was due to free hydrochloric acid, as has been generally supposed by physiologists, or to the presence of some other acid.

To determine whether any free hydrochloric acid was present, two drops of a strong solution of nitrate of silver were added to about thirty drops of the distillate, when a decided precipitate, resembling the chloride of silver, was visible; upon adding a single drop of chemically pure nitric acid, this white precipitate was immediately re-dissolved. If this had been a chloride of silver which was thrown down, nitric acid would have been entirely unable to dissolve it. But it is known that nitric acid will dissolve the white lactate of silver, and it seemed from this fact justifiable to suppose that the precipitate might be that of the lactate of silver, as it was proven not to be a chloride.

To determine the truth or falsity of this supposition, about thirty drops of the distillate were added to an equal quantity of fresh milk, when no effect was observed; but upon boiling the milk a decidedly flocculent appearance was distinctly visible, and upon allowing the fluid to stand for an hour or two it became so solid that the test-tube could be turned on its side without the contents flowing out. It is known that lactic acid will produce this effect under these conditions, while if the acid had been muriatic the casein of the milk would have coagulated without boiling. The distillate also coagulated the albumen of a fresh egg. To determine whether these results were obtained by the action of some new substance formed in the process of distillation, or whether such a substance existed in the fluid before distillation, part of the *original filtrate* was added to fresh unboiled milk, when no coagulation was observed; but upon boiling the milk a very decided coagulation was perceptible, and upon allowing the fluid to stand the same effects took place as before. The filtrate also had the property of coagulating animal albumen.

In order to investigate this subject more fully, the contents of the stomach were subjected to dialysis in a glass vessel prepared for the purpose by forming a diaphragm of parchment paper, and the dialyzer so made was suspended in a porcelain vessel containing a small quantity of distilled water and allowed to remain at rest for forty-eight hours. Then the dialyzed fluid was seen to present a strongly acid reaction. To ascertain whether this acidity was again due to lactic acid, a small quantity was added to an equal amount of fresh unboiled milk, when no effect was observed, but upon subjecting

it to heat the casein became entirely coagulated and in a few minutes was perfectly firm. To this fluid obtained by dialysis were now added a few drops of a solution of nitrate of silver, when a dense white precipitate was thrown down, which was only partly cleared upon the addition of nitric acid, showing that it was not entirely composed of the lactate of silver, but probably partly of the chloride of silver; but then this chloride could not have been formed from free hydrochloric acid, because the milk-test showed that none existed. It was probably made from some of the soluble chlorides, as of sodium, which are known to exist in the stomach. In fact, this man had probably taken some of this salt with his food at breakfast, and then this chloride had undergone dialysis as freely as the lactic acid. As these facts are strongly characteristic of lactic acid, it seems justifiable to conclude that free hydrochloric acid, as such, did not exist in this gastric juice, but that its acidity was due to the presence of free lactic acid.

To determine the presence of phosphates, the original filtrate was evaporated to dryness over a hot sand-bath, and the residue then completely charred; after all organic matters had been completely destroyed, the ash was dissolved in hydrochloric acid, and then carefully filtered. This clear filtrate that thus resulted was neutralized with ammonia, when a white precipitate, the phosphate of lime, was thrown down. The quantity of phosphate was very small. There was no evidence of the acid phosphate of lime.

The following deductions confirm entirely those obtained by Profs. F. G. Smith and Rogers, of the University, from the analysis of the gastric juice of Alexis St. Martin.

I. The gastric juice presents an acid reaction both before and after filtration and distillation.

II. The acidity in this instance was not due to the presence of hydrochloric acid.

III. Lactic acid did exist.

IV. Acid phosphate of lime showed no evidence of its presence.

V. Neutral phosphate did exist, and was held in solution by the lactic acid.

I would take this opportunity of expressing my thanks to Mr. George Hay, a member of the class, and a gentleman of great experience as an analytical chemist, under whose careful supervision these experiments were conducted.

PHYSIOLOGICAL LABORATORY OF THE UNIV. OF PENNA.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF R. F. LEVIS, M.D.

Reported by Dr. JOHN B. ROBERTS.

FIXED DRESSINGS IN THE TREATMENT OF FRACTURES—THE COMBINATION OF GLUE AND OXIDE OF ZINC A NEW MATERIAL FOR FIXED DRESSINGS.

IN treating fractures it is often desirable to apply some form of dressing which will hold the parts in perfect apposition and yet allow the patient to be out of

bed, moving about the wards of the hospital, or even taking exercise in the open air. This is not a matter of much difficulty in fractures of the bones of the upper extremity, for then, after an ordinary wooden or pasteboard splint has been adjusted, the patient can walk about as freely as he chooses; but until within a few years a fracture of the leg was kept at rest by using a fracture-box, and the patient confined upon his back for five or six weeks.

Undoubtedly the greater frequency of ununited fractures and delayed union in the lower than in the upper extremity is to be attributed in part to keeping the limb long in a horizontal position, or even elevated above the rest of the body; for the natural position of the limb is dependent, and its blood-supply is necessarily interfered with when the patient occupies the supine position for a period of five or six weeks.

The necessity for a dressing to overcome this difficulty has long been recognized by surgeons, and accordingly the different forms of immovable apparatus for the treatment of fractures have been devised. As originally proposed by Seutin, it has been modified and much improved from time to time, until now perfection has perhaps been attained in a new material or composition devised by Dr. Levis and used for some time in the Pennsylvania Hospital.

It is necessary that judgment be exercised to determine when the fixed dressing shall be employed, for its premature use may occasion much harm. It is not desirable to encase a limb in the immovable apparatus until inflammation and swelling have subsided, because, by exerting undue pressure, it might readily induce gangrene of the limb. After the patient, however, has been kept at rest for a week or more, and after the tumefaction and inflammation consequent upon the injury have abated, it is proper in simple fractures to apply the fixed dressing, which, permitting the patient to rise from his bed and go about on crutches, lessens very much the weariness of protracted decubitus.

Many substances have been recommended to give the requisite stiffness to the dressing, some of which are desirable on account of cheapness, others because of the rapidity with which they harden; the great desideratum being to have an article which possesses both these essential characteristics. Starch, dextrine, silicate of sodium or potassium, gum arabic and chalk, plaster of Paris, glue, and paraffine have all been experimented with, and each has found its admirers.

The starch bandage is applied by carrying an ordinary roller, which has been wet, up the limb, previously wrapped in cotton wadding, as far as deemed necessary; boiled starch is then rubbed into the bandage, after which the roller is carried downwards to the extremity of the injured limb, and again saturated with starch. This manipulation is continued until several thicknesses have been applied, when pasteboard splints softened by boiling water and moulded to the inequalities of the surface are adjusted to the parts, and surrounded by another layer of starch bandage. In the course of twenty-four or thirty-six hours the starch becomes dry, and the dressing, strengthened by the interlying pasteboard, acts as a firm support to the fractured bones.

The silicate of potassium or of sodium may be used in the same manner; but, as it dries much more rapidly than starch, it can be applied upon many layers of bandage, and therefore acquires the requisite degree of firmness without pasteboard as an adjunct, which only serves to complicate the dressing.

When these dressings have become perfectly dry, they can, if it is thought necessary, be split up the middle of the leg by Seutin's scissors, and then retained in apposition, and their pressure regulated, by an additional bandage.

A very excellent fixed fracture-apparatus, denominated the Bavarian dressing from its extensive use in the late Franco-German war, is made with plaster of Paris in the following manner. Two pieces of flannel, each large enough to envelope the limb once, are selected and laid one upon the other; down the middle from one end to the other they are stitched together by two seams, say two lines apart, in order to form a hinge when the dressing is complete. The flannel is adjusted to the limb so that the seams lie along the posterior aspect; and then, while an assistant holds the *inner* layer close around the limb, the surgeon rubs upon it a sufficient quantity of plaster mixed with water. Before this becomes hardened the outer layer of flannel is also drawn up tightly around the limb, and thus, in a few moments, is made a case composed of two layers of flannel with plaster between them.

As soon as hard, the case is removed by opening it like a book, which can be done because the seams prevent the plaster getting between the layers posteriorly, and thus form a hinge; the edges of the flannel having been trimmed off smoothly, the apparatus is re-applied, and retained by a simple roller.

This form of dressing was much employed in the hospital a year ago; but although the limb is firmly encased, and the plaster rapidly desiccates, yet there are a number of objections to its use. In the first place, making the case is a dirty process; then the plaster sometimes becomes brittle and crumbles; but the greatest objection is the weight of the dressing, which renders it tiresome for the patient to walk about. From the rapidity with which it can be applied, the Bavarian dressing is particularly suited for military emergencies, when men having sustained fractures must be transported, but for civil practice it is too heavy for the patient to wear.

After experimenting with various kinds of fixed dressings, Dr. Levis seems to have arrived at one which fulfils all requirements; being cleanly in its application, drying with sufficient rapidity, removable without difficulty, exceedingly light, and withal very cheap. The fixing material is ordinary glue, with which oxide of zinc has been incorporated, either by the manufacturer or by the surgeon at the time of using it, in order to cause it to harden rapidly.

Several pieces of flannel—old blankets or worn-out underclothing answering the purpose admirably—are selected and cut the requisite size. One of these is laid around the limb, and the two edges are tightly stitched together along the anterior surface, allowing the edge to project above the seam; then the melted glue, with oxide of zinc, is painted upon this with a brush. The dressing may be strengthened by an additional layer of flannel or blanket saturated with the glue and oxide of zinc, and made to adhere to the underlying layer. A third or even a fourth layer may be thus applied, if it is deemed necessary, and the limb supported until the dressing dries, which requires from four to eight hours.

The stitches of the seam on the front of the limb having been cut with scissors, the edges of this elastic case are sprung apart, and the dressing removed. The edges are then trimmed smooth, and a number of eyelets inserted, in order that the case may be laced like a shoe, and the degree of pressure regulated.

This fixed fracture-apparatus is exceedingly light, is made from materials almost everywhere obtainable, and is much cheaper than the silicate dressing. There are at all times pieces of waste flannel or cloth about a large hospital which can be appropriated, while the glue and zinc could probably be supplied at a very low price per pound,—a quantity sufficient for the manufacture of many such splints. Another advantage is its elasticity, which permits its removal without endangering the splint, for it can be pulled apart, and immediately

springs into place around the limb to which it has been moulded.

By a little care and dexterity in stitching on the layers of flannel, the surgeon can readily shape the dressing so that both the leg and the foot are completely encased.

TRANSLATIONS.

THERAPEUTIC AND PHYSIOLOGICAL ACTION OF IPECACUANHA AND OF ITS ALKALOIDS.—Dr. Polichronie has made, in M. Vulpian's laboratory, a series of very interesting researches in order to ascertain the mode of action of ipecac and emetine. M. Polichronie's conclusions are as follows:

1. Emetine is the true active principle of ipecacuanha; all the physiological, therapeutic, and toxic properties possessed by this plant are due to the presence of its alkaloid.

2. In dysentery, as in diarrhoea, ipecac administered by injection possesses as active properties as when it is given by the mouth, according to the Brazilian method.

3. Ipecac by injection is one of the best forms of treatment which can be employed in cholera infantum; it may be supported for a long time without enfeebling young subjects.

4. In tuberculous diarrhoea, whatever may be the period, injections of ipecac give good results.

5. This medication may also be employed with advantage to combat the profuse sweats of phthisis.

6. Emetine is a highly toxic substance: it may give rise to death in animals in two ways,—sometimes by prostration of the nervous system, sometimes, when given in smaller doses, by the intense enteritis which it provokes.

7. Two hypotheses are possible to explain the favorable action of ipecac in diarrhoea: *a*, a vaso-constrictive action, which diminishes the abundance of the secretions; *b*, a substitutive action, which results from the inflammation of the mucous membrane.

8. The vaso-constrictive action does not take place, as experiments made upon the nerve of the submaxillary gland and upon the arterial tension show.

9. The production of inflammation of the gastro-intestinal mucous membrane, the duration of which is prolonged after vomiting has been brought about, seems, on the contrary, to plead in favor of the second view.

10. Emetine causes vomiting at the moment when it is eliminated by the gastric mucous membrane, while vomiting is retarded, and even more frequently does not take place after section of the par vagum. It is quite different with apomorphia and tartar emetic. These two substances bring about vomiting as quickly when these nerves are cut as when they are intact.

11. Finally, physiological and chemical researches upon the medicine argue in favor of elimination of emetine by the gastro-intestinal mucous membrane.

12. Emetine has no direct vomitive action upon the central nervous system, as is proved by direct injections of this substance into the cerebral arteries.

13. Therefore, it may be admitted that, in diarrhoea, emetine acts by substituting for the pathological inflammation a fresh one tending to spontaneous cure, its effect in these conditions being in every way comparable to that of purgatives or nitrate of silver.

14. In sweats we can no longer admit a vaso-motor action, and we are obliged to believe either that being eliminated by the sudoriferous glands it tends to restrain their secretion, or, better, that it acts by the revulsion which it causes to the digestive tube (Thèse de Paris, 1874).—*Bulletin Général de Thérap.*, January, 1875.

CHLOROSIS IN CHILDREN.—Dr. M. E. Bouchut recently delivered a clinical lecture on this subject at the Hôpital des Enfants Malades. The lecturer began by alluding to the fact that chlorosis as found in young girls is rare among children. Usually the chlorosis of children is rather a pseudo-chlorosis, due to some visceral affection. The two diseases are frequently confounded, but a distinction should be made between them, since we know that in true chlorosis we have a spontaneous insufficiency of blood-globules, or rather an insufficiency the causes of which are unknown to us. In pseudo-chlorosis, on the contrary, there are always lesions of a more or less appreciable kind, visceral affections evident or latent. It may occur after epistaxis, intestinal hemorrhage following enteritis, albuminous nephritis, chronic bronchitis, chronic amygdalitis. Any of the diseases of children may bring about this condition, of which physicians too often do not take proper account.

M. Bouchut then directed attention to certain cases in the hospital illustrative of the different forms of the affection. In the first of these, a child, he remarked that the cause of discoloration of the skin would be sought in vain; the chlorosis had come almost without symptoms. There had been no diarrhoea, no constipation, no catarrhal affection of the intestine, the vesicular murmur in the lungs was normal, the heart was decidedly dilated. No blowing, præcordial, aortic, or carotid murmur could be detected save by pressure over the latter. The child had merely general discoloration of all the cutaneous and internal teguments, at least so far as the latter were visible,—that is, of the mucous membrane of the mouth and lips. The nails also were decolorized. The first symptoms noticed had been headaches; she had not suffered from pain in the side or stomach; had not had syncope.

A second case in a child presented similar symptoms, with the addition of fainting-fits. A third case was of a somewhat different nature; it concerned a young girl fourteen and a half years of age. Her disease was the chlorosis of women. She menstruated regularly but scantily; the discharge was very slightly colored. She had had dysmenorrhœa and bleeding at the nose, but the latter was not sufficient to account for the disease.

As this girl had arrived at an age when moral causes might have given rise to the disorder, this point was inquired into, but with a negative result. Her hygienic surroundings had also been good. Two other cases occurring in girls of twelve and seven years respectively were also alluded to. No cause could be ascertained for the disease in either instance.

In these four cases, united by the symptom of globular insufficiency, the diagnosis was comparatively easy, but in other cases, remarked M. Bouchut, this might present considerable difficulty. Occasionally one sees children with neuralgias, malaises, with discoloration more particularly of the mucous membranes: in these cases one has under examination a doubtful case; chlorosis is diagnosed with an interrogation-point, and the neuralgias, etc., are called chlorotic.

The child might have a blowing murmur in the region of the heart: anæmic murmur, one says; but this blowing murmur may belong to an endocarditis, and in place of a true chlorosis one may have a pseudo-chlorosis.

M. Bouchut went on to say that he had long held to the idea of an anæmic, a chlorotic murmur; little by little, however, he had finally come to abandon this notion as false. Experiments made by M. Chauveau, of Lyons, had proved that intra-vascular murmurs depend neither upon the character nor upon the density of the liquid carried in the vessels, but are to be attributed entirely to mechanical causes, and are the result of vibrations. Blowing murmurs cannot, therefore, serve in the diagnosis of chlorosis.

Virchow has lately advanced the theory that chlorosis is not produced by an insufficiency of globules, but that it is always an anomaly of the system of vessels; narrowing of the aorta, for instance. There are then numerous blisters, a honey-combed condition of the middle coat of the arteries; then hypertrophies of the heart, dilatation, fatty degeneration of the heart; such, according to Virchow, are the causes of a chlorotic affection.

The objections to this theory, according to M. Bouchut, are, first, the rarity of post-mortem examinations in cases of chlorosis; second, the impossibility of thus explaining instantaneous chlorosis brought about by moral causes; and third, an objection which would seem to annul this theory of a vascular origin of the disease is its temporary nature and curability under the influence of iron or hydrotherapy within a few months.

In the face of the existing difficulties in diagnosis, and when there is an aortic murmur, the diagnosis is to be made differentially. Finding nothing else, to an insufficiency of the blood-globules is attributed the cause of the disease. Finally, as to treatment, stimulants may be employed as well as tonic preparations, iron in all forms,—iron by hydrogen, by electricity, pyrophosphate of iron, etc. These medicines should be given in small doses and frequently repeated. In some cases ferruginous mineral waters are beneficial. In general the soluble preparations, as lactate of iron, are undesirable, on account of their tendency to form tannate of iron with the astringent fluids of the mouth, and thus cause discoloration of the teeth. The patient's stomach should also be stimulated by aromatic wines, wine of gentian, etc. Hygienic means—fresh air, bathing in sea and river water, inhalations of compressed air and oxygen, with a course of hydrotherapy or at least of daily douches—will be found beneficial.—*Le Mouvement Médical*, Dec. 19, 1874.

X.

THERAPEUTIC NOTES.

TO MAKE BRANDY.—Take 20 gallons proof spirits, 5 gallons pure cognac brandy, 1½ ounces oil of cognac, ¾ ounce cænanthic acid, ¾ ounce acetic ether, 1½ ounces tincture of kino, 1 pint simple syrup, mix, and color to suit with burnt sugar. If it is desired to imitate any other brandy, use that instead of the cognac. But this method of adulteration costs too much, as it requires pure brandy, and oil of cognac is rather expensive. The following will not cost so much.

To make cognac brandy, 20 gallons proof spirits, 2 ounces acetic ether, 2 ounces acetic acid, 2½ ounces tincture of kino, 5 pounds bruised raisins; 2 pints simple syrup, color with sugar, let it stand two or three weeks and draw off.—*S. P. Sharples, in Journal of Applied Chemistry*.

TREATMENT OF PRURITUS VULVÆ.—M. Hardy frequently employs the following formula:

R Hydrarg. chlor. corros., gr. xv;
Alcohol., ℥iii;
Aq. destillat., ℥iii 3v.—M.

Tablespoonful in a tumblerful of warm water. Avoid rubbing the parts while applying the lotion.

In that form of pruritus vulvæ so often found accompanying pregnancy, Danyau employs the following formula:

R Zinci oxid., ℥i;
Sodii borat., ℥ss;
Cerat. simpl., ℥ss;
Ol. amygd. dulc., q. s.;
Morphiæ muriat., gr. iii.—M.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

HOPKINS UNIVERSITY.

MUCH as we may enjoy the deserved plaudits awarded of recent times to American surgery and American medicine, every honest American physician must recognize with regret that the *science* of medicine has not flourished on this continent; that the higher original work on which the art is founded comes almost solely to us from abroad. Recently, it is true, papers of real value upon physiology and the kindred sciences have straggled into the journals; but many an insignificant European town eclipses the great continent of America in the amount of value which it yields to the abstract medical sciences. This is not because the German intellect is superior to the American, nor even because it is "more scientific and less practical" than that of the American, but because a scientific career in this country is scarcely possible to any one who has not a private fortune at his command. It is commonly stated that the German is willing to live on less than is the American, and therefore devotes himself to science although it does not pay. There may be a certain amount of truth in this, but undoubtedly that amount is very limited. In selecting a career, a young man balances the prospects on either side. Practising medicine does not pay so well in Germany as with us, and consequently the opposition to the choice of a scientific career is less. More than this, in Germany science does pay, and does pay those well whose ability enables them to draw the prizes.

Von Recklinghausen recently refused, it is said, an offer of ten thousand dollars a year to go to Vienna. Where is the professorial position in the United States that pays five thousand dollars steadily? and ten thousand dollars in Germany is worth fifteen thousand here.

A purely scientific medical career is almost an impossible thing in America; and hence it is, as the *Nation* puts it in regard to other departments, that "to the higher thought of the world we contribute shamefully little." It is therefore with the most unbounded satisfaction that we see a prospect of a better day for our country in the Hopkins University. This institution, it will be remembered, was founded by the late Johns Hopkins, of Baltimore, who left \$3,500,000 for the endowment of the University, and a like sum for the foundation of a hospital in connection with it. Fortunately, the bequest was untrammelled, and the twelve trustees were well selected. They appear to be men of sufficient mind and culture to recognize the importance of using these great funds so as to build up a real seat of learning, not a mere high school dignified by the sobriquet of a university. What they have done may be judged by the following extract from a contemporary:

"They accordingly sent for President Gilman, of the California University, and asked him what he would do if he were put at the head of the new enterprise and were left perfectly free. He said in substance that he would make it the means of promoting scholarship of the first order, and this by only offering the kind of instruction to advance students which other universities offer in their post-graduate courses, and leaving the kind of work now done by under-graduates to be done elsewhere. For this purpose he would select as professors men now standing in the front rank in their own fields; he would pay them well enough to leave them at their ease as regards the commoner and coarser cares; would give them only students who were far enough advanced to keep them constantly stimulated to the highest point; and he would exact from them yearly proof of the diligent and fruitful cultivation of their specialties by compelling them to print somewhere the results of their researches.

"We are glad to say that the Hopkins trustees fell in cordially with Mr. Gilman's terms, and offered him the presidency of the new institution, and that he will probably accept it. It is a great opportunity, and we hope and believe it will be rightly used."

All this, to us, reads too much like a dream to be true. To see a really great medical school, every one of whose professors holds his position by virtue of the title-deeds he yearly produces,—a college which is in truth a great centre of medical thought, and not merely an elementary school of medicine,—

a place where the really great intellects which exist among us shall be freed from the necessity of fretting their lives away in the details of a practice which, perhaps, would be better attended to by inferior men,—a place which shall gather up that great waste of talent which eats up the higher life of our country,—to see this is more than we had ever hoped for. We can scarcely yet believe that no local reputation or influence, no “grandmothers or grandfathers,” will prevail, but that only such talent as has proved itself will be admitted to this institution. One thing is certain: by choosing the best men from all portions of the United States, giving living salaries, and urging to work, these twelve trustees can do more for American medical science than the American Medical Association has done during the whole of its highly honorable and most productive career.

MOST of our city readers are familiar with the shooting of Dr. Henry R. Wevill, an account of which was published in our columns some little time since. Dr. Wevill has been, of course, left a cripple for life, with his business broken up, and all his available funds spent during the long and severe illness which followed the amputation. It is proposed to raise a fund to enable him to prosecute the person who did the shooting. We commend this matter most heartily to members of the profession. Contributions may be sent to Dr. Thomas G. Morton, or to the editor of the *Philadelphia Medical Times*.

THE funeral reform seems to us to be nearly brought to a *reductio ad absurdum* in the number of the *Lancet* for January 16. Carrying still further the suggestion of Mr. Hodan in the *London Times*, that wicker-work coffins should be substituted for the nearly imperishable caskets now employed, our medical confrère suggests that all coffins shall be abolished, so as to save expense, and so that the ground can be readily tilled, declaring that “even the wicker-work coffins would present serious obstacles to tillage.”

ACCORDING to Dr. Cameron's report, twenty-one thousand pounds of unsound meat were condemned in Dublin during December last. We would like a report as to how many pounds of unsound meat were eaten in Philadelphia during the same period.

THE London Obstetrical Society, according to the *London Lancet*, by its almost unanimous decision that women are not admissible to its fellowship, expressed the feeling of a large majority of its members, that women by nature are disqualified from practising obstetrics.

LEADING ARTICLES.

THE USE OF COLD IN FEVER.

OF all recent improvements in medicine, no one appears to bear with it promise of so much practical life-saving value as does the use of cold in fever. The application of cold water is no new thing: employed by Galen, used not infrequently during the last century, first systematized and insisted upon by Currie, cold bathing in fever was brought before the world as a really new-born measure by Brandt of Stettin, and received the seal of permanent usefulness from the scientific clinical labors of Jurgensen at Kiel. In his article upon the subject, Jurgensen stated that from the year 1850 to 1861 there had been treated in the hospital at Kiel, according to the expectant method, three hundred and thirty typhoid-fever patients, with a mortality of fifteen and four-tenths per cent.; while from 1863 to 1866, during which period the anti-pyretic method was employed in one hundred and sixty cases, the mortality was three and one-tenth per cent.

Attracted by this remarkable statement, Liebermeister entered upon a very elaborate clinico-physiological research, and has been followed by a large number of observers. In this country the method is scarcely more than beginning to attract attention, and, so far as I know, no exhaustive résumé of the work accomplished has as yet appeared in the language, so that a series of leading articles upon the subject will probably not be lacking in interest.

The consideration of the method naturally divides itself into—first, a study of its physiological action; second, an investigation as to its clinical value; and third, a more particular account of its effect, the cases to which it is best adapted, and the method of its application.

It must be remembered that cold is not an entity, but is only a term employed for brevity's sake to express the abstraction of heat. The effect of the abstraction of caloric when the bodily temperature is above normal is in no wise dependent upon or parallel to the effect of a similar decrement of heat when the animal temperature is normal. It is therefore evident that no abstract discussion of the effects of cold upon the healthy organism is necessary to the right understanding of its therapeutic use; and I shall entirely remit the consideration of this to works on physiology and the practice of medicine.

On the other hand, a discussion of the effects of excessive temperature upon the human organism would be very pertinent to the matter in hand. The effects of acute pyrexia have, however, been so freely commented on in the columns of this journal that their consideration here is scarcely necessary.

The effects of a long-continued pyrexia, not sufficiently intense to induce immediate serious symptoms, upon the structure of the various tissues, have been elaborately investigated by Liebermeister (*Deutsches Arch. für Klin. Med.*, Bd. i.), who found that the liver, spleen,

kidneys, voluntary and involuntary muscles, blood-vessels, and even the nerve-centres undergo a granular degeneration during a continued pyrexia. The lesion was constantly present in the bodies of those who had suffered in this way during life, entirely independent of the nature of the primary disease. In cases of infectious fever in which the temperature had never been high, this granular degeneration did not exist. Previous to the investigation of Liebermeister, Zenker had demonstrated that the muscles undergo a peculiar granular degeneration in typhoid and other fevers, and the fact has been abundantly attested by later observers. I do not know that the observations of Liebermeister as to the occurrence of this lesion in non-infectious pyrexia have been confirmed, but I have no doubt of their correctness.

It is evident from the above brief résumé that in fever a primary therapeutic indication is to reduce the temperature. Of course, if possible, this should be done by checking the excessive production of heat; but, unfortunately, this often lies out of our power, and we are forced to abstract the heat by mechanical means.

It is *a priori* impossible to determine what effect upon the production of heat the rapid abstraction of it would have, but, from the well-known powers of the organism to resist external cold, it would seem probable that the heat-production would be increased rather than diminished by the abstraction of caloric. An experimental study of this problem has been made by several observers.

Weisflog (*Deutsches Archiv für Klin. Med.*, Bd. ii. p. 570) has found that the local abstraction of heat by a cold sitz-bath causes a rise in the temperature of the axilla, and that in fever-patients, unless the sitz-bath is prolonged over twenty minutes, no fall of the bodily temperature results.

In 1860, Kernig (*Reichert's Archiv*, 1860) found that a healthy man in a bath of the temperature 28° – 30° C. produces about twice as much heat as normal; in baths of 24° , about three times as much; and in baths of 20° C., about four times as much.

Liebermeister found that in a healthy man exposure to cold ("Beobachtungen und Versuche über die Anwendung des kalten Wassers bei fieberhaften Krankheiten," Leipsic, 1868) for a brief period of time causes a rise in the bodily temperature, and on extending his researches into fever proved that where the external cooling was not too powerful or too long continued the same was true of fever-patients. From this it follows that the use of external cold stimulates heat-production. This has been confirmed by the chemical researches upon men of J. Gildemeister (*Virchow's Archiv*, Bd. lii. p. 131) and of Prof. Liebermeister (*Deutsches Archiv für Klin. Med.*, Bd. x. p. 89), and by those of A. Roehrig and N. Zuntz (*Pflüger's Archiv*, Bd. iv. p. 66) upon animals, which show that both in health and in fever very much more carbonic acid than normal is eliminated under exposure to cold. Cold baths, therefore, do not have a direct immediate tendency to diminish the production of animal heat, but, on the

contrary, increase it. The further investigations of Liebermeister (*loc. cit.*, p. 134) and others have shown, however, that the first rise of temperature produced alike in healthy and in fever subjects by exposure to a moderate and not too long continued cold is followed after removal of the cold by a fall of bodily temperature of greater or less degree. Whilst, therefore, external cold first stimulates, it afterwards depresses the production of animal heat.

The further experiments of Liebermeister (*Deutsches Archiv*, Bd. x. p. 425) upon the elimination of carbonic acid are also in accord with his temperature-study, for he found that after the bath the elimination sank down below normal, and continued so for some considerable time.

The results of the physiological study of the effects of cold in fever may be summed up as follows:

During a prolonged and severe application of cold the bodily temperature falls, although an increased production of heat—*i.e.*, consumption of tissue—occurs; afterwards, the bodily heat continues to fall, or but slowly regains its former position, because there is a diminished production of animal heat. In most cases of fever the increased consumption of tissue which occurs during the cold bath is of no moment; in the hectic of phthisis it may be of importance.

The above considerations comprise the most important part of our physiological knowledge upon the subject in hand; in the next article the clinical evidence as to the value of cold bathing will be considered.

H. C. W.

CORRESPONDENCE.

BALTIMORE, January 30, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—At a meeting of the Medical and Surgical Society, Prof. Arnold related the case of a young man, now in the Washington University Hospital, who takes from ten to twelve grains of morphia daily. He fell from a trapeze, on which he was performing, and injured his spine. He suffers intense pain, and life is miserable without morphia. He would like to abandon its use, but cannot find a substitute which will make the pain endurable. His health does not seem at all impaired by the opiate. De Quincey and Coleridge lived to a good old age, and it would seem that opium of itself does not have such a deleterious effect on the digestive system as we have been led to believe. Dr. Wilkins said that he knew a lady who uses sixty to ninety grains of morphia daily. There is no impairment of digestion.

Dr. Uhler referred to two cases of belladonna-poisoning. In one he used stimulants, in the other opium. The results were equally good.

At this point quite a spicy discussion arose upon the supposed antagonism of belladonna and opium, and the reliability of therapeutics. The general opinion was that no true antagonism exists between the two

drugs mentioned. In regard to therapeutics, the assertion was made that it was so unreliable that it was difficult to base any opinion upon it, and that it did not become any one to dogmatize in the matter; that any dunc could prescribe, but that it requires education to diagnose and apply proper remedies to the existing condition of the patient.

At the Baltimore Medical Association, the President, Dr. Tanneyhill, related the case of a lady who had aborted eleven times from syphilitic contamination. Potassium iod. and hydrarg. bichlor. had been used, and under their influence the child had approached nearer to a healthy condition than in any previous pregnancy; but in none was the child viable. He thought that there was hope that eventually she would bring forth a living child.

Dr. Atkinson said that in long-standing cases of syphilis the tendency is to relapse, and that it is necessary to keep up the treatment for a long time.

Dr. Tanneyhill said that in this case he had treated it continuously for nine months.

Dr. Hoel said that a gentleman who had suffered from syphilis years ago, consulted him in regard to the propriety of marrying, which he discountenanced. Another physician, however, informed him that there would be no danger, and he married a healthy widow. She aborted at six months. In her second pregnancy she exhibited nodes on the tibia, and syphilitic disease of the nose. The child was withered, and was unable to nurse. It was kept alive by brandy, and, after it had gained a little strength, was put to a wet nurse, and did well. The parents were placed upon anti-syphilitic treatment, and, eighteen months after, the mother was delivered of a perfectly healthy child. For seven months there were no signs of syphilis, and the treatment was discontinued. He was called one night to see her, suffering from what was supposed to be cholera morbus, but which proved to be gastritis. She was getting along well, when paralytic symptoms appeared, and she died in a very short time. He thought this paralysis due to syphilitic disease of the nervous system, especially as she had complained for some time of a dull boring pain in the side of the head.

The Medical and Surgical Society held its annual election on the 7th instant. The officers for the year are—President, Dr. J. W. P. Bates; Vice-Presidents, Drs. C. M. Morfit and J. R. Uhler; Recording Secretary, Dr. G. L. Wilkins; Corresponding Secretary, Dr. J. H. Rehberger; Treasurer, Dr. P. Dausche; Committee of Honor, Drs. Morris, Monmonier, and Reynolds; Executive Committee, Drs. Cathell, Evans, and Dodge; Committee on Lectures and Discussions, Drs. Winternitz, Caldwell, and Rutledge; Librarian, Dr. E. F. Hamel. After the election, the Society was invited to partake of a fine supper provided by the retiring President, Dr. Morris. The session was quite prolonged, and was enjoyed by all.

The Maryland Academy of Science formally opened their new hall last week, with an oration by Prof. E. Lloyd Howard, M.D. After much hard labor and

many disappointments, the Academy, from a very weak organization, has developed into a strong and earnest scientific body. It contains the names of many prominent physicians on its roll, and they add much to the interest of its semi-monthly meetings. Its collection is large, well displayed, and constantly increasing. Prof. Philip R. Uhler, the Librarian of the Peabody Institute, is the President. MEDICUS.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting held Wednesday, December 9, 1874,

Vice-President Dr. I. S. ESHLEMAN in the chair,

Prof. HENRY H. SMITH presented to the Society a patient suffering from a very bad *ununited fracture of the shaft of the femur*.

Before showing the limb, Dr. Smith requested the gentleman to walk the length of the hall, which he did with only a slight limp.

Dr. Smith then read the following history of the case.

"Colonel J. W. T., of Iowa, æt. 56 years, was thrown from his wagon on the 20th of May, 1873, and his right femur broken, so as to make a comminuted fracture that separated the entire middle third of the femur from its superior and inferior thirds. After being dressed for nine weeks with a straight splint, he was permitted to sit up, the splint being removed. It was then discovered that, whilst there was partial union of the upper and middle thirds, there was no union at the junction of the middle and lower thirds of the bone. Upon consultation, about the eleventh week after the injury, it was decided to place a *seton* between the ends of the bones at the lower seat of fracture. This being left in place for eight days developed such active suppuration under the femoral fascia, with high inflammatory fever, as to threaten the patient's life, and the seton was therefore withdrawn. Ten days subsequently, when the general symptoms had improved, the fracture was again permanently dressed with the same straight splint, and the patient kept at perfect rest, on his back, for eight weeks. On again examining the limb, twenty weeks after the accident, no union had been obtained, and, as his general health and strength were much impaired by suffering and confinement, it was decided to put him on crutches and let him take exercise as he could.

"After three months' trial, the failure of union rendered the limb a useless encumbrance. At this time he was advised by his physician to go to Chicago and obtain one of Dr. Smith's artificial limbs for ununited fracture, as represented in his 'Surgery.'

"This apparatus, though imperfectly made and fitted, enabled him to obtain some use of the limb, so that, by the aid of crutches, he was able to travel to Philadelphia, where he has been fitted by Spellerberg & Gemrig with two limbs, to insure him against injury to either one."

His ability to walk well with the artificial limb was thoroughly recognized by the Society. The apparatus being removed, the members examined the limb freely and found as follows:

Present condition, December 9, 1874.—The fracture is very apparent, and the union of the lower and middle thirds of the femur so imperfect as to permit the leg to be bent to a right angle with the middle of the thigh; the leg and foot to be rotated so that the calf and heel

would be uppermost whilst the patient lies on his back, whilst the end of each fragment is closed at its medullary canal and solidly rounded off. Extension separated these ends about one and a half inches. The upper and middle thirds at the seat of fracture presented a true false-joint, the ligamentous union of which gave more firmness to this fracture, but it was unable to sustain the limb. The entire thigh was much emaciated, the muscles atrophied, and the course of the seton between the ends of the lower fracture was readily seen.

Dr. Smith said he had especially wished the members of the Society to see how well this patient could walk with the apparatus on, though his limb was otherwise useless, because he had for a long time taught and shown that amputation for an ununited fracture was an unjustifiable operation, a patient walking better with his limb on in one of Dr. Smith's forms of splint than he could with his limb off in the best artificial limb ever made. There was also the constant chance of union being obtained through the apparatus, by the principle proposed by Dr. Smith,—viz., pressure and motion at the seat of fracture.

Dr. Smith also stated, in reply to an inquiry by Dr. Lee, that he had published a full account of the forms of his apparatus, principles of treatment, etc., as required in the treatment of ununited fracture, in his work on Surgery, and also in the *American Journal of the Medical Sciences*, vol. xxix., new series, 1855, and had given drawings of the apparatus, which were also published in most of the catalogues of the cutlers in the United States; but, as his paper appeared to be unknown to many of the members of the Society, Dr. Smith proposed referring to the subject of this treatment on some future occasion.

The apparatus, he stated, was applicable to every form of false-joint in any of the extremities, as the fore-arm, etc.

Dr. O'HARA asked the experience of the gentlemen present on scarlatina as at present occurring.

Dr. HAMILTON said, in reply to a question by the President in regard to the prevalence of scarlet fever, that he had not seen many cases lately; that the returns of the Board of Health, the only reliable source of information, showed a slight increase for the few past weeks. In this connection, Dr. H. stated that in one family he had recently seen four children affected with, apparently, a combination of diphtheria and scarlet fever. Two of the cases were very mild, the third not severe, the fourth violent and peculiar in some features. No rash appeared in any instance. The attendance upon the fourth case, a boy of eight years, whose throat was ulcerated and nasal passages discharged an excessive amount of fetid purulent fluid, had ceased, but was, at the end of five days, resumed. The face and feet were then œdematous. Two days later, the right side of the chest gave no normal sound; left side perfectly resonant. In three or four days the resonance had returned, almost completely, to the right side, and had disappeared from the left, to return almost as quickly as in the case of the right side. An examination of the chest was made during convalescence, by Dr. William Pepper. The special feature of this case is of course seen in the rapidity of effusion and absorption of serous fluid.

Dr. H. C. WOOD, Jr., then delivered a lecture on the principles which govern the use of electricity in paralysis.

Dr. BALDWIN asked Dr. Wood how soon after the occurrence of an attack of hemiplegia he would consider it safe to commence the use of electricity.

Dr. WOOD answered, usually not for two months; the use to be continued until the muscles had recovered their normal tone.

Dr. BARR said that Bard and Rockwell, in their "Medical and Surgical Electricity," mention the case

of a dog, whose skull had been trepanned, in which the ascending current caused the vessels to contract and the brain to fade perceptibly, while the descending current caused the vessels to fill and the brain to protrude through the opening in the cranial vault. He also asked how Dr. Wood accounted for the fact, if such it be, that one pole of the faradic current gives more pain to the hand than the other.

Dr. WOOD replied that usually it was very difficult to distinguish between the poles of a secondary current. He had always seen those who said they could do it fail when the electrodes were applied to the arm. Undoubtedly, however, one of the to-and-fro currents is stronger than the other.

Dr. COLLINS thought the same effect was produced by both poles when the pressure and moisture were the same.

GLEANINGS FROM OUR EXCHANGES.

SPERMATIC COLIC.—Reliquet insists much on these facts in making the diagnosis: 1, that the first pain is produced suddenly at the time of coitus; 2, that subsequently every erection, or even every desire for coitus, produces pain. They are, he says, the subjective symptoms. These, combined with the objective signs, especially with the uniform swelling of the seminal vesicle, should lead to a correct diagnosis.

He reports the case of a man, æt. 35, who for several years had often suffered, when at stool, from the emission of a small quantity of thick, white liquid. For two months he had experienced pain, extending from the anus to the perineum, or emissions, during coitus or when emptying the bowels. The erect posture and walking provoked frequent micturition. Attempts to retain his urine caused acute pain and cold sweats. The pain lasted four or five minutes after urination. He lost desire to sleep. Venereal desires and erection provoked pain. During one month and a half he had passed small quantities of blood with his urine.

A gum-elastic bougie was passed easily into the bladder, but caused excessive pain in the deep part of the urethra. He was sounded for stone the next day, but no foreign body was discovered in the bladder. On examination from the rectum, the left vesicula seminalis was found swollen, hard and smooth. It was painful on pressure. After the sounding, an attempt was made to pass the bougie once more, but the instrument was arrested at the neck of the bulb, and then withdrawn. After two or three minutes of extremely sharp, cutting pains in the penis and the anus, the patient stooped down, and, emptying the bladder, expelled as many as forty small opaque white bodies, about the size of a small pin's head or a lentil. They presented facettes and blunt angles, like prostatic calculi, but their consistence was soft, and they could be crushed between the fingers. To the naked eye they appeared to be formed of a white homogeneous material, devoid of any capsule.

After the passage of these bodies, the symptoms quickly subsided, and, on examining from the rectum on the third day, the left seminal vesicle was found of the same size as the right.

The bodies were found to correspond closely to the concretions found in normal vesiculæ, only greatly increased in volume.—*Atlanta Medical and Surgical Journal*, December, 1874.

OPTIC NEURITIS (*The Lancet*, Jan. 16, 1875).—Dr. Hughlings Jackson insists (1) that severe neuritis may exist when the patient's sight is apparently perfect, and (2) that neuritis may (with large doses of iodide of potassium) pass away, leaving sight quite good.

FORCE AND STIMULANTS.—*The Lancet* of Dec. 12, 1874, asserts editorially that at the present day our treatment has assumed a character too decidedly stimulant and not quite sufficiently nutritive. Stimulants ought to be regarded as auxiliaries to nutrition more than they are at present. Nutritive material, as milk, meat-juice, eggs, and various forms of starch, ought to form a greater matter in the dietary of the sick than stimulants, whether nitrogenized or alcoholic; such materials, when assimilated, give supplies of force. Stimulants may assist in their assimilation, and do so; but in themselves stimulants only furnish limited supplies of force-bearing material. They are, however, a means by which the system may reach some of its physiological reserve fund. Such use may be advantageous or pernicious, according to circumstances; and an ill-regulated or excessive process of stimulation may give results as disastrous as a wise and intelligent resort to stimulants may be beneficial and preservative in its consequences.

TREATMENT OF SYPHILIS (*The British Medical Journal*, Dec. 12, 1874).—Mr. James R. Lane thinks that in the treatment of syphilis the main principle to be followed is, that mercury is the remedy for the secondary stage, and that the iodides are the remedy for the tertiary. He believes iodine to be seldom if ever useful, and usually harmful in the first, while mercury is rarely if ever admissible in the latter. There are cases, however, in which the two conditions overlap, in which tertiaries become developed while chronic secondary affections still remain; and here a combination or alternation of the two remedies becomes useful; alternation being better than combination, the iodide being used first until the tertiary symptoms are removed or amended and the health improved; after which a mild course of mercury may be cautiously resorted to for the remaining secondary affections.

ANEURISM (*The Lancet*, January 16, 1875).—Mr. C. F. Maunder believes that the result of the inquiries which Mr. Holmes has made will alter the views hitherto held by surgeons, as it appears that the mortality from ligature after compression has failed is ten per cent. greater than when the Hunterian operation has been performed at once, while others were not cured. Allowing for accidental circumstances, the results of the two methods, compression and ligature, have been as nearly identical as possible in a long series of cases extending over many years and a large variety of districts. Prolonged, gradual, and intermittent compression may either retain the aneurism *in statu quo*, or favor ill success altogether; but it must also be borne in mind that rapid compression is sometimes followed either by a return of the disease or by suppuration and sloughing of the sac. Of one hundred and six cases in which compression was tried, it was necessary to resort to the ligature in fifty-six; forty-seven recovered, and nine died.

The mode of treatment which Mr. Maunder advocates for the cure of popliteal aneurism, and all other suitable cases, is moderate compression, alternating with relaxation, say for a fortnight, with a view partly, if thought desirable, of promoting a more free collateral circulation in the limb; and, at the expiration of this time, continuous compression, either digital or instrumental (completely obstructing the artery), maintained under chloroform or opium, if necessary, for a period of from six to twelve hours, or even longer, and assisted by a tourniquet on the distal side of the sac if the first attempt does not succeed. Should a few sittings fail to effect good progress in the aneurism, the ligature must be resorted to.

After a review of his experience, he comes to the following conclusions:

1. That no case of aneurism is to be regarded as necessarily incurable.
2. That some cases of internal aneurism are apparently cured by absolute and prolonged rest, restricted diet, and other medical treatment.
3. That, when possible, compression, either proximal or distal, is to be employed in addition.
4. That in all aneurisms in which treatment by ligature is known to be a very fatal operation, the above rules are to be first applied.
5. That the treatment of progressive aneurism at the root of the neck by the distal operation is justifiable after medical treatment has failed.
6. That in rare instances only may an aneurism be treated by ligature before compression has been tried and has failed.
7. That digital is to be preferred to instrumental compression.
8. That chloroform and morphia are valuable aids to compression.
9. That chloroform will probably prove to be a more effectual agent than morphia in all cases, but more hazardous.
10. That the value of morphia should be more thoroughly tested.

EPILEPTIC DREAMS (*The Lancet*, January 16, 1875).—In chronic conditions of mental impairment it seems certain that "subjective" sensations are factors in producing delusions. Thus, a lunatic who has subjective smells may think his food is poisoned (compare the popular theory of the development of dreams, etc.). The temporary subjective sensations which usher in an attack of epilepsy probably give a turn to the mental disorder at the onset of and after the paroxysm. The probability is that such subjective sensations, which are practically external, develop or give a turn to dream-like states preceding complete loss of consciousness, or to the delirium or mania sometimes following the paroxysm.

EFFECT ON RESPIRATION OF THE CONDITION OF THE RESPIRATORY CENTRE (*The British Medical Journal*, January 2, 1875).—In a recent lecture on the Experimental Investigation of the Action of Medicines, Dr. T. Lauder Brunton alluded to the condition which is called "apnoea" by the German writers, in which the blood circulating in the respiratory centre is not at all venous, but is perfectly arterialized; the centre is less sensitive, the natural irritant—carbonic acid—is diminished or removed, and the respiratory movements cease. He continued as follows:

The activity of the respiratory movements and the amount of air respired in a given time depend on the degree of excitement of the respiratory centre. As we have just seen, this excitement depends on two factors: 1, the excitability of the centre; and, 2, the amount of irritation applied to it. In general, the venosity of the blood determines both factors, and it is not the venosity of the blood in the general circulation which does this, but only of that blood which courses through the vessels of the medulla. This was shown by Hering, who passed a stream of arterialized blood through the vessels of the head while venous blood was circulating in those of the body. The respiratory movements then ceased exactly in the same way as if the whole blood in the body had been perfectly oxygenated. When he reversed these conditions, and passed arterialized blood through the body and venous blood through the head, asphyxial convulsions took place. This shows that the degree of activity of the respiratory centre in the medulla oblongata depends on the greater or less venosity of the blood circulating through it, and not on an irritating action exerted by venous blood on the ends of afferent nerves in the lungs or other viscera.

The excitability of the respiratory centre may be greatly modified: 1, by the temperature of blood in it; 2, by the action of drugs upon it. When the blood becomes warmer, the excitability of the respiratory centre is greatly increased; the movements of respiration become much more vigorous, and it is no longer possible, by the most active artificial respiration, to produce a state of apnoea. Certain drugs, as tartar emetic, or apomorphia, when injected into the veins, also prevent the production of apnoea; but whether they do so by increasing the excitability of the centre, or by acting as irritants to it, is uncertain.

Other drugs, such as chloral, greatly diminish the excitability of the respiratory centre, so that the respirations become fewer, notwithstanding the increase of carbonic acid in the blood to which their diminution gives rise, and if the dose be large they may stop altogether. Apnoea may also be produced by means of artificial respiration with great ease after their administration, and it may last so long that one is sometimes inclined to think that the animal is not going to breathe again at all.

STRANGULATED HERNIA SUCCESSFULLY TREATED BY PNEUMATIC ASPIRATOR.—An engine-driver, aged 50, had suffered for three months from inguino-scrotal hernia. When first seen, the tumor in the scrotum was found to be tender on pressure, the patient suffering intense pain, and harassed with frequent vomiting, flatulence, and general uneasiness. All efforts at reduction failed. The attempts to restore the intestine by means of taxis were renewed the following morning, the patient being put under the influence of chloroform, but the results were still negative. A No. 2 needle (Dieulafoy's) was accordingly thrust at right angles to and well into the sac; on turning the tap, about two drachms of a serous fluid and bubbles of gaseous matter were drawn into the instrument, proving that the bowel had been perforated. The aspirator was emptied, and again set, and the needle drawn somewhat outwards. This change of position evidently placed the point in the hernial sac, out of which were drawn from four to five ounces of sero-sanguineous fluid. The tumor suddenly collapsed, and, on manipulation, the hernial protrusion was found to have disappeared. The patient made a rapid recovery.—*Edinburgh Medical Journal*, December, 1874.

CATALEPSY FOLLOWED BY EPILEPSY (*The Lancet*, January 9, 1875).—Surgeon-Major Chapple reports the case of an officer, æt. 30, steady and abstemious in his habits, quick and intelligent intellectually, whom he was asked to visit in consequence of sudden illness. He found him sitting at a table, immovable, pale, cold, with a weak pulse, and entirely speechless. On removing him to bed, he remained in any position in which he was placed. Soon after his head rested on the pillow, startling sounds became audible, creaking and straining so intense that it seemed as if the bones must break if the noise came from muscular action. Up to this time the body had been placid and still as death, but a severe epileptic fit then occurred, with the usual convulsions, after which he regained his health.

Subsequently he had attacks of petit mal, sometimes three and four a day, but the grand mal did not occur oftener than three times a year. Bromide of potassium was of great benefit to him.

PERIOSTEAL FLAPS IN AMPUTATION (*Chicago Medical Times*, January, 1875).—Tizzoni believes that the results of numerous operations on animals, and occasional examinations of stumps of patients, justify him in making the following statements as to the advantage of periosteal flaps:

1. The operation is easily performed. At the present

day, when pain and blood are spared the patient, it is a matter of small consequence if a little more time is consumed than usual.

2. The periosteal flaps retract considerably, but equally and without wrinkles.

3. These flaps will remain spread over the cut surface of the bone.

4. In twenty-four hours there will be a firm adhesion between the medulla and the flaps. Later, they consolidate with the bone. This early adhesion is of the greatest practical significance. It protects the medulla from the influence of the pus that may possibly form about the end of the bone.

THE SLEEPING SICKNESS OF WESTERN AFRICA (*The British Medical Journal*, January 2, 1875).—Surgeon-Major Gore gives a history and description of African lethargy, the treatment of which has proven so unsatisfactory, and the mortality so great,—seventy-three per cent. of those attacked having died. The first intimation is a swelling of the glands about or around the neck, accompanied by a gradual inclination to sleep, which increases; and the person so affected will fall asleep at all times, and in all places, no matter what he may be doing,—working, eating, walking, talking, or anything else,—only awakening at short intervals. Sometimes the body swells in the progress of the disease, and at other times in its first stage. The skin becomes dry and dusty, the strength palpably decays, and the most massive form becomes reduced. This continues for six or twelve months, more or less. Just before death, the patient suddenly ceases to sleep; this is the forerunner of death always.

GASTRO-PULMONARY FISTULA.—Fistulous openings between the stomach and other organs are, it is well known, the occasional consequence of the progress of gastric ulcers. Perforation of the diaphragm is one of the rarest of these events, and very few instances of it are upon record. A well-marked case, however, is described by Dr. Juliusburger, of Breslau, in the *Berliner Klinische Wochenschrift*, and is of especial interest from the marked symptoms which existed during life and rendered the diagnosis of the condition tolerably easy. Symptoms of gastric ulcer had existed for some months, when signs of perforation showed themselves, with peritonitis, etc., followed by fulness of the right side of the epigastric region, and in a day or two by dulness in the right side of the thorax. A month afterwards, after a rigor, quantities of stinking fluid were coughed up; the epigastric swelling, before dull, became resonant, and pressure upon it increased the expectoration, in which from time to time particles of food were found. Death occurred two months afterwards, and an ulcer was found on the posterior surface of the stomach, near the pylorus, which communicated by a small opening with a cavity the size of a fist, formed apparently by peritoneal adhesions, and containing air and fluid. At the upper part of this, a small opening through the diaphragm, about the size of a fourpenny-piece, communicated with the right lung, the openings of several small bronchial tubes being exposed. In both lungs there was disseminated tubercle, and in the spleen were some pyæmic abscesses.—*The Lancet*, January 16, 1875.

TREATMENT OF TYPHOID FEVER BY COLD (*The Practitioner*, January, 1875).—Dr. Frederick T. Roberts objects to a routine hydropathic treatment of any fever, but thinks it highly desirable that the members of the medical profession should be more generally impressed than they are at present with the usefulness of the various modes of applying cold to the surface of the body in febrile cases under certain circumstances.

He believes that the cases in which the more severe

methods of applying cold are indicated are those in which the temperature is already very high, and remains so, or shows a tendency to rise rapidly, especially if at the same time there are signs of much nervous disturbance. Unquestionably, this plan of treatment is not resorted to under these circumstances nearly so frequently as it ought to be. It is difficult to lay down any exact rule as to what temperature indicates the necessity for adopting it, but if it reaches to 106° Fahr., and shows no tendency to fall, or, still more, if it continues to rise, this treatment deserves due consideration. Necessarily, much will depend on the actual condition of the patient, and every case must be thoroughly considered in all its features. The best method seems to be decidedly that of placing the patient in a tepid bath and gradually cooling it. Affusion over the head is useful if there are marked nervous symptoms.

TREATMENT OF THE DIARRHŒA OF TYPHOID FEVER (*The Practitioner*, January, 1875).—Dr. George Johnson, after an experience of many years, has arrived at the conclusion that in the treatment of typhoid fever careful nursing and feeding are of primary importance, while, as a rule, no medicines of any kind are required, and, when not required, they are often worse than useless. The patients are fed mainly with milk, with the addition of beef-tea and two raw eggs in the twenty-four hours, and he gives wine or brandy in quantities varying according to the urgency of the symptoms of exhaustion, especially in the advanced stages of the disease. Milk should be given alone, unless the patient is able to digest eggs and beef-tea, and is one of the best antidotes for the diarrhœa of typhoid fever.

SYPHILITIC HÆMOPTYSIS (*The Lancet*, January 16, 1875).—At a recent meeting of the Clinical Society of London, Dr. Farquharson related a case of hæmoptysis occurring in a syphilitic patient, with no abnormal physical signs in the heart or lungs, and rapidly cured by iodide of potassium and perchloride of mercury. He believed the disease was due to an exudation analogous to that in condylomata, occurring in the minuter bronchial tubes, from which blood is slowly poured out into the air-vesicles, and, accumulating there, sets up irritation and gives rise to the hard cough. Hence the danger that destructive changes might take place in the lung-tissue if the exudation remained unabsorbed, and the value of anti-syphilitic treatment as compared with astringents.

Dr. Southey observed that such cases of hæmoptysis were not rare in syphilis, and that violent hæmoptysis was often the first symptom of disease of the lungs in syphilis. In these cases he had observed that the blood was dark-colored, and not bright red, as in phthisis; and there might be no physical signs in the lungs except the loss of breath-sounds over parts of the lung. He thought it probable that the exudation might be in the air-vesicles, and not in the small bronchi, in many cases, and the pathological condition giving rise to it was probably thrombosis of the pulmonary veins. Thrombosis is known to occur not infrequently in syphilis in the systemic veins; and this explanation would account for the absence of physical signs.

THERAPEUTICS OF IODIDE OF POTASSIUM (*The British Medical Journal*, January 2, 1875).—Mr. J. M. Wilson used iodide of potassium, in four-grain doses, every three or four hours, in a case of asthma. In a short time the asthma was relieved, but the patient was seized with intense pains across the loins, diminution in the secretion of urine, and great pain on passing it. This condition was relieved by appropriate treatment, and for a fortnight no medicine was given. Then the asthma returned, and the iodide was given again, and

was followed in a few hours by threatenings of the same pain and discomfort. The case was one in which there was a strong rheumatic diathesis, and the trouble following the administration of the iodide probably resulted from its having caused an increase in the amount of uric acid to be secreted by the kidneys. Dr. James Laine believes that the one distinct and indisputable action of the iodide of potassium is that of *stimulating the mucous membranes* and promoting their secretion. He explains in this way its beneficial effect in chronic winter cough, in asthma, in chronic bronchitis, in diphtheria, etc. He believes also that in all the various manifestations of struma, where the medicine is of service, it acts, so far as the iodine is concerned, in stimulating the mucous membrane of the stomach and duodenum—possibly by sympathetic action the liver and pancreas also—to increased secretion, whilst its alkaline base tends to promote the digestion of fat and starch. In such diseases as diphtheria, the object should be to produce its influence as rapidly as possible, whilst in others, as struma, small doses long continued are preferable.

UNILATERAL PARALYSIS OF THE PALATE (*The Lancet*, January 16, 1875).—In some recent remarks, Dr. Hughlings Jackson said that he had not discovered paralysis of the palate in uncomplicated disease of the portio dura nerve, and that deviation of the palate is not uncommon in healthy people.

This statement may seem a rash one, as paralysis of the palate is said by physicians of the greatest eminence to occur with facial palsy, owing to disease of the trunk of the portio dura nerve above the giving off of a branch to Meckel's ganglion, which branch, through the intermediation of that ganglion, is believed by most anatomists to supply the levator palati. According to Troeltsch, however, the levator palati is supplied by the vagus nerve. This would accord with the results of Dr. Jackson's clinical observation, as he has found well-marked palsy of one side of the palate, along with palsy of the vocal cord on the same side, from intracranial disease.

TREATMENT OF HYDRARTHROSIS.—In cases of dropsy of the joints, especially that of the knee, Dr. Bergeret finds the continued application of bags of hot sand to answer better than any other kind of treatment. When the acute stage is passed, and whatever may be the cause of the dropsy, he wraps the joint in a thick layer of cotton-wool, and applies to this a sac containing two or three litres of fine and very hot sand. The dropsy disappears in a few days. The sand must be very hot, and the heat may be kept up by means of covering with a blanket. The sand must not be too thick in the bag, so that it may extend easily on the knee, and overhang the hydrarthrosis in every direction.—*Journal de Thérapeutique*.

THE DIAGNOSIS OF FATTY DEGENERATION OF THE HEART IN ADVANCED LIFE (*The Lancet*, January 9, 1875).—Dr. Leonard H. Jayne, after seeing a number of fatal cases of fatty degeneration of the heart, believes that certain symptoms are diagnostic of that disease,—viz., feeble and irregular or intermittent pulse, dyspeptic symptoms, epigastric pain, frequent vomiting (more especially after taking food), and diarrhœa. In cases of simple hypertrophy, where there was no fatty degeneration present, he has never observed such symptoms as vomiting, gastric pain, diarrhœa, and feeble and irregular pulse.

SATURNINE GOUT (*The British Medical Journal*, January 2, 1875).—Dr. Wilks reports a case in which lead-poisoning was followed by well-marked symptoms of gout, both being relieved by the use of opium and iodide of potassium.

MISCELLANY.

GOLDING BIRD ON IMBEDDING IN ELDER-PITH FOR CUTTING SECTIONS.—C. H. Golding Bird (*Quarterly Journal of Microscopic Science*, January, 1875) finds elder-pith, much used in former years, a very favorable imbedding material for cutting sections: The principle recommended by the author is the same as that adopted by Ranvier, viz., the swelling of the parenchymatous tissue of the dried pith in the presence of moisture. The object to be cut is placed in elder-pith, and this is fitted into Ranvier's microtome. If water be poured upon it, the pith will have swollen in a very short time sufficiently to hold the specimen firmly in its place. "As to the quality of the sections obtained, I am almost converted," says the author, "to the belief that it matters but little, except in one or two cases, how or in what one imbeds, but that a good result is rather owing to the skill and ingenuity of the manipulator in each particular case. Every one upholds, naturally, the way in which he himself is accustomed to work, and rightly so."—*London Medical Record*.

THE PROFESSION IN FRANCE.—The number of medical men in France seems to remain stationary. In 1847 there were 10,643 practitioners, or one to every 3244 inhabitants. In 1866 there were, taking in the annexed departments, 11,525, still, by a singular coincidence, averaging one to the same number of inhabitants above cited. In 1872, when Alsace and Lorraine were lost to France, there were only 10,766 doctors, or one to each 3353 inhabitants. This dearth of medical assistance is attracting considerable attention in France, and is likely before long, according to the *Revue Scientifique*, to become the subject of legislative interference. The unequal distribution of the available number of medical practitioners renders the situation all the more serious: for instance, in the department of the Seine there is a doctor to every 1115 inhabitants, whilst in the department of the Morbihan there is only one to each 10,576 of the population,—a scarcity of medical aid which is surpassed in the case of one department, which rejoices in the medical care of one practitioner only for 11,000 people.—*London Medical Record*.

FEMALE OBSTETRICIANS.—Notwithstanding a few plausible arguments that may be adduced in favor of female obstetricians, it is, we think, a moot point whether obstetrics is not, after all, the very department of medical and surgical practice for which women are morally and physically least fitted. Perhaps, indeed, the strongest disqualification of the female obstetrician is the moral; but the physical incapacity of women is more apparent. No one who knows anything of the arduous and anxious duties of the obstetrician, of his exposure to rude and inclement weather, or of the serious contingencies of midwifery practice, is justified in seriously encouraging women to enter upon this field of labor.—*London Lancet*.

THE value of sponges collected this season on the Florida reef is estimated at \$165,000.

PURVES ON THE PLACE WHERE THE WHITE BLOOD-CORPUSCLES WANDER OUT OF THE VESSELS.—L. Purves (*Onderzoekingen gedaan in het Physiol. Labor. Utrecht*, 1873, iii.), to investigate the place where the white blood-corpuscles pass through the wall of the vessel in Cohnheim's experiment on inflammation, injected a solution of silver into the vessels of a frog prepared after the manner of Cohnheim. The colorless corpuscles, without exception, wander out between the boundaries of the epithelioid cells. They never pass through the substance or through the nucleus of an epithelioid cell. According to the author, the red corpuscles only pass out by those channels which have been previously made for them by the colorless corpuscles. The author found no stomata of any kind on the epithelium of the vessels.—*London Medical Record*.

ACCORDING to the *Pharmaceutical Gazette*, M. Hayduck has been investigating orthoamidotoluenesulphonic acid, and diazorthoamidoparatoluenesulphonic acid; the same authority also affirms that the action of tin and hydrochloric acid on nitro-bromacetanilide gives rise to the hydrochloride of ethenylbromophenylenediamine.

DR. W. R. GILMORE, Ambulance-Surgeon at the Reception Hospital, New York, recently died from the effects of a curious accident. Owing to an icy sidewalk, he fell upon the point of his umbrella, which penetrated the orbit.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—One and one-half grains of digitalis were administered every two hours, and not half a grain, as stated, in the case of Mr. T., published Jan. 23. A. K. MINICH.

SCHUYLKILL COUNTY MEDICAL SOCIETY.

At a regular stated meeting of the Schuylkill County Medical Society, held at Pottsville on Wednesday morning, Jan. 6, the following officers were elected:

President, Dr. G. K. McKibbin, Ashland.

Vice-President, Dr. A. P. Carr, St. Clair.

Treasurer, Dr. W. H. Senderling, Port Carbon.

Secretary, Dr. R. S. Chrisman, Pottsville.

Corresponding Secretary, Dr. J. J. Yocum, Ashland.

Censor, Dr. W. R. Owens, Ashland.

Doctress Mary A. Swayze was elected a member of said Society.

Dr. A. P. Carr read a very interesting paper on Croup, and presented a specimen of false membrane showing a perfect cast of a part of the bronchial tubes.

NORTHERN MEDICAL ASSOCIATION OF PHILADELPHIA.

A stated meeting will be held at the Hall of the Northern Dispensary, 608 Fairmount Avenue, on Friday evening, February 26, at 8 o'clock.

Subject for discussion: "Anomalies of Refraction," with exhibition of new instrument for determination. To be introduced by Dr. S. D. Risley.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 2, 1875, TO FEBRUARY 8, 1875, INCLUSIVE.

BENTLEY, EDWIN, ASSISTANT-SURGEON.—To proceed to Camp Bidwell, Cal., for temporary duty at that post, and, upon its completion, to return to his station in San Francisco, Cal. S. O. 11, Department of California, January 25, 1875.

SATURDAY, FEBRUARY 20, 1875.

ORIGINAL LECTURES.

ON THE PRINCIPLES WHICH GOVERN THE USE OF ELECTRICITY IN MOTOR PARALYSIS.

An Abstract of a Course of Three Lectures delivered at the University Hospital.

BY H. C. WOOD, JR., M.D.

LECTURE III.

GENTLEMEN,—In our previous lectures we have sufficiently studied the laws of galvanic currents, their effects upon normal muscles, and the methods of their application. To-day we shall consider directly their use in disease. I shall not try to point out in what palsies you shall employ them, but rather give you such principles as will enable you to make your own deductions as to individual cases.

Galvanic currents are employed in paralytic affections for three distinct purposes,—namely, diagnosis, prognosis, and therapeutics. These I shall consider in the order in which they have been enunciated.

There are certain palsies, such as pseudo-muscular hypertrophy, in which the muscular structure is so destroyed independently of any involvement of the nervous system that no response to the galvanic current is possible. All of these palsies are, however, essentially exceedingly chronic, and their diagnosis is to be made out chiefly by a microscopical examination of the muscles themselves. As electricity does not come into play in the diagnosis of these cases, I shall not say more about them. It is otherwise with suddenly-developed paralysis in which the history does not point to any immediate cause, as diphtheria. Often, in such cases, galvanism is of great diagnostic value. As stated in a previous lecture, when a muscle is entirely deprived of the influence of the spinal centres it rapidly loses its electro-contractility, whereas, if a muscle be paralyzed from a lesion of such character or position as not to interfere between it and the trophic cells of the cord, it maintains its integrity for many weeks. When a muscle is degenerating for want of spinal influence, it first loses its power of responding to rapidly-interrupted faradic or chemical currents, then to slowly-interrupted faradic currents, then to slowly-interrupted chemical currents, and lastly to slowly-reversed chemical currents. When, therefore, a muscle loses its power of responding to the rapidly-interrupted faradic current in a week or ten days after the occurrence of paralysis, the inference is very positive that the lesion is either one of the nerve-trunk, or, being of a nerve-centre, is of such a character as seriously to involve the trophic cells of the spinal cord. If a few days later such muscle is unable to respond to any faradic current, this inference becomes a certainty. Under these circumstances the possible lesion is narrowed down to infantile paralysis, a conceivable

destructive myelitis, and an affection of a nerve-trunk.

A *myelitis* so rapid and severe as to destroy in a few days a portion of the spinal cord, and consequently the electro-contractility of its tributary muscles, is exceedingly rare, and, if it occurred, could offer no difficulties of diagnosis. In *infantile palsy* the nature of the case is usually but too apparent, although the muscles often lose their electro-contractility as quickly as when a nerve-trunk is severed. Practically, therefore, very rarely is there any difficulty in recognizing the seat of the lesion in acute organic palsies by means of the galvanic test. It may be laid down as a practically invariable rule *that when in the adult a muscle loses to a sensible degree in a few days its electro-contractility, the lesion is in a nerve-trunk.* In recognizing, however, these peripheral palsies, it must not be forgotten that the injury to the nerve may be very deeply situated; even within the membranes or substance of the nerve-centres. This is especially to be borne in mind when it is a cerebral nerve that is affected. Thus, a tumor situated in a superficial portion of the brain may press upon the fibres of a nerve just as they are collecting together previous to leaving the brain, and the result will be a palsy which is really a peripheral one, although the tumor is in the nerve-centre. The persistence of the muscular contractility intact for some weeks after the occurrence of a palsy depending upon an organic lesion, proves that the disease is of cerebral origin, or, being spinal, is of such nature as not to compromise seriously the trophic nerves of the cord.

In applying these rules, you must not forget that whenever a muscle is not used it loses its contractile power, so that even in paralysis from cerebral hemorrhages the muscles finally degenerate, although this degeneration is rarely so complete as in peripheral palsies. It is not the fact of degeneration, but its degree, and especially the period of time which elapses between its occurrence and the commencement of the paralysis, which is the important factor in the diagnosis. In cerebral palsies no distinct loss of functional activity in the muscles is usually perceived sooner than six weeks after the onset of the attack, and even after years have elapsed some response is usually elicited by strong slowly-interrupted or reversed currents.

There are certain palsies in which the electro-muscular contractility is really or apparently above normal. Very frequently the excessive contractions produced are not so markedly in the muscles to which the currents are applied as in other muscles, whose movements are in reality reflex in their nature. In all these cases the probabilities are that there is a condition of acute hyperæmia or of excessive functional irritability of the spinal cord.

In regard to certain so-called functional palsies, the muscles in *lead-paralysis* very generally lose their electro-contractility, and, curiously enough, according to my own observation may recover to a marked degree the power of voluntary motion, without a corresponding restoration of their normal electrical relations.

In *hysterical paralysis* any aid to diagnosis is often of very great value; and it has been asserted that in this class of palsies the preservation of electro-contractility with loss of electro-sensibility is always present, and is of diagnostic value.

My experience, however, is very positive that in hysterical palsy both electro-contractility and electro-sensibility are frequently normal. When, however, in any case the muscle responds to galvanic currents, although the patient is to a great extent, or altogether, insensible to their passage, a very positive diagnosis of hysteria may be given. The electro-contractility is never seriously compromised in hysterical palsy.

In using galvanism as an aid in *prognosis*, the condition of the muscular contractility is always to be considered in conjunction with the nature of the lesion and the length of time it has existed.

Taking first ordinary *hemiplegia* as the type of *cerebral* palsies, it must be borne in mind that the actual existent amount of paralysis is really the product of two essentially different factors. The nerve-centre is primarily damaged, and after a time the muscle also suffers loss of structural integrity from want of use. The restoration of the nerve-centre does not necessarily involve the restoration of the muscle, so that in a case of hemiplegia of some standing, the cerebrum may have recovered itself partially or entirely, and yet the muscle be in such a state of degeneration as to be unable to respond to the impulse transmitted to it from the nerve-centre.

Under these circumstances, galvanic treatment, although unable to affect to any extent the nerve-centres, does great good by restoring the muscular tone. It is manifestly impossible in such a case to determine before treatment how far the nerve-centre has recovered itself, or, in other words, to what extent the existing paralysis is of centric and to what extent it is of muscular origin. When, in a case of apoplectic hemiplegia, there is no recovery at all of the power of voluntary movement after the lapse of six weeks, the prospect of decided improvement from electrical treatment is very gloomy, because the probabilities are altogether in favor of the existence of a serious, persistent centric lesion. If, however, there is some motion, the probabilities of improvement are inversely proportionate to the structural health of the muscles. If the tone and the electro-contractility of these are normal, the centric factor is the chief one in the production of the paralysis, and little good is to be achieved by the use of the galvanic current. On the other hand, if the muscles have undergone a very decided degeneration, much good is to be expected. No hopes of absolute cure should, however, be held out, because in the great majority of cases, after the muscles have been fully restored, the nerve-centre is found to be more or less damaged. The improvement is usually at first rapid, but after a time ceases altogether, because, the muscles having recovered their tone, it is not possible to affect, to any great extent, the sole remaining cause of the paralysis, *i.e.*, the centric lesion. Under these circumstances it is useless to continue treatment.

In *infantile paralysis*, early in the attack the galvanic current is of little value in determining the prognosis, excepting that the general law is, that the more rapidly electro-contractility is lost, the more serious is the case. In advanced cases, the length of duration and the condition of the electro-contractility in the muscles are both to be considered. If no response at all to an electric current can be obtained, the prognosis is always very grave; although even under such circumstances a decided improvement has occurred in a small percentage of the cases I have treated. If the case be an old one, the preservation of some degree of electro-contractility indicates that the structural lesion in the cord is not a fatal one, and as, under these circumstances, the muscles can always be more or less perfectly restored, the prospect of improvement is a very certain one. The preservation of electro-contractility late in the disorder, when the centric lesion is no longer progressing, is of much more import than it is in the first few weeks or months of the case, when the central trouble may be increasing.

In *peripheral palsies* the prognosis depends rather upon the nature of the nerve-lesion than upon the condition of the muscle; but it must be remembered that when a muscle has absolutely lost its power of responding to any electrical current, its restoration is always a matter of difficulty and of doubt.

In regard to *therapeutics*, the first point to be determined in acute cases is very often when to commence electrical treatment. When the lesion is of such nature as not to provoke any irritation of the nerve-centre, no time should be lost. Thus, if a man is unable to use his arm because he has slept with it under his head and thereby paralyzed the nerve by pressure, the electrical treatment should commence at once.

When, however, the lesion is of such character as of necessity to irritate the nerve-centres, the case is different.

The local stimulation of the peripheral nerve-fibres by electrical current does, in some way not yet definitely understood, affect the nutrition of the nerve-centres; and when these nerve-centres are in a state of active excitement or inflammation, a peripheral galvanic irritation may do serious injury to them. Hence the rule that where an acute palsy is connected with active irritation of the nerve-centres, galvanism should not be used upon the muscles until the centric disturbance has subsided. Thus, in *hemiplegia* from cerebral hemorrhage the muscles must be allowed to rest until not only all symptoms of centric irritation have subsided, but until the brain has become so accustomed to the clot that the latter no longer acts as a foreign body. It is usually from three to six weeks before electricity can be used with advantage in these cases. Again, in acute *cerebritis*, *cerebral* or *spinal meningitis*, and *myelitis*, the use of galvanic currents should be strictly forbidden until a stage is reached when the effects of the inflammation, and not the inflammation itself, are to be dealt with.

When it has been decided to commence the use of galvanism, it is next to be determined what cur-

rent shall be used. You will remember that I have demonstrated to you that there are no inherent mysterious differences in the various currents; yet there is a practical difference, and the clinical rule of choice is, *Always select that current which produces the most muscular contractions with the least amount of pain*; trying the rapidly-interrupted faradic, or, if you have only a chemical battery, chemical current, and the slowly-interrupted faradic or continuous current, and always, when these fail to elicit response, the slowly-reversed chemical current, which, if necessary, may be increased in strength until the patient can no longer bear the pain.

The current having been selected, the individual muscles must be galvanized at each séance.

After what has been said in a previous lecture, it is not necessary to speak to you concerning the best methods of applying the currents to the muscles; but, remember, it is not the electricity directly, but the contractions induced by it, which benefit the palsied parts.

There are certain precautionary rules which must never be lost sight of in the galvanic treatment of palsies. Pain is an evil, and its infliction is always to be avoided as far as possible. Hence the rule never to use stronger currents than is necessary. It is very possible to fatigue a healthy muscle, much more a diseased one. A weak muscle may be greatly injured by being over-fatigued. Hence the rule that currents are not to be applied to muscles so long at one time as to induce fatigue. In general, an electrical séance should last from ten to twenty minutes, no one muscle being subjected to the currents for more than five minutes.

ORIGINAL COMMUNICATIONS.

TWO CASES OF CONGENITAL DEFORMITY.

BY H. C. HAND, M.D.

I. IMPERFORATE ANUS, THE RECTUM OPENING INTO THE VAGINA.

ON the 10th of March, 1874, there was born, of middle-aged and healthy Norwegian parents, a child with the above malformation. It was plump and healthy, and did not seem to be inconvenienced by the abnormal point of discharge for its fæces. At the place where the anus should have been there was a small teat-like projection. A short distance above the hymen the posterior vaginal wall was found wanting, and was absent from this point up to the uterus, the os uteri looking directly into the rectum.

The case was in the medical care of Dr. C. E. Smith, who requested me to undertake its surgical conduct.

On the 3d of April, assisted by Dr. Smith and Dr. D. W. Hand, an attempt was made, as follows, to establish an anus in its natural location. A crucial incision was made through the skin and subjacent tissue to the depth of about three-fourths of an inch; the yielding intestinal wall, being now reached, was steadied by passing the little finger of the left hand in through the vagina upon it, and then divided. The mucous membrane was brought down and stitched to the skin as well as might be; but this was very imperfectly, for, as the anterior wall of the rectum was absent, there was, of course, at that part no mucous membrane to bring down. The

rectum formed no pouch below its opening into the vagina, but made a direct course into that canal.

An anus was thus made sufficiently large to admit the little finger. A piece of wax bougie was tied in, and the patient left in good condition. Little or no reactionary fever followed. The bougie was removed, reintroduced, and worn without difficulty until towards the close of the first week, when the mucous membrane, having let go its adhesions below, formed a valve at its original site, which prevented the upward passage of either the wax bougie or the finger.

A large bead was procured, somewhat larger than the desired size of outlet, and fastened to a stout ligature; the other end of the ligature was threaded in an eyed probe, bent into a semicircle. The probe was then passed in at the vagina and out at the anus, through the opening previously made. The probe and ligature were drawn through until the bead was fairly fixed at the termination of the natural rectum, where the valve-like process prevented communication with the incision upward from the anus. The bead was allowed to remain in this position, the ligature being fastened on the back just tight enough to hold it. Several times a day smart traction was made, after which the ligature was re-fastened as before. In three days the bead worked its way through, and came out at the anus. The little finger could now be readily introduced, and from this time onward the mother found no difficulty in introducing her little finger daily. A curious complication arose about four weeks after the operation, in a copious eruption of vaccine vesicles in and about the anus.

Another child at the same time had a vaccine scab on his arm, from which the mother unconsciously vaccinated the baby in this undesirable location. The incision became ulcerated in its entire extent, and for a time it was feared that the septum between the anus and the vagina would be destroyed. But the ulcerative action was stayed without working this mischief.

After the fretfulness from the vaccination wore off, the child did well in every way until the following November. At first, only a little of the fæces passed by the anus, but gradually more and more, until when it lay on its back all generally passed by the anus, while if it defecated when lying on its face more or less would always come through the vagina. Defecation was performed but little oftener than natural.

Towards the close of November, 1874, the parents noticed that the child was not so well as usual, and on the 10th of December it died of meningitis.

If the patient had lived, I think the opening between the vagina and the rectum would have closed spontaneously: at least it was making good progress to that end; or, if it should not have entirely closed, it would at least have become so small that its edges could easily have been pared and united when she had reached the proper age.

II. SPINA BIFIDA WITH CLUBBED FEET.

Mrs. B., a healthy Irishwoman, and the mother of several fine children, on the 10th of January, 1875, after a labor consisting of but one pain, gave birth to a medium-sized and well-nourished child, deformed as follows: In the middle line of its back, opposite the middle lumbar vertebrae, was a flattened rose-like tumor, one and a half inches across its top, one-half inch in height, and having a constricted base. On its base and sides this tumor was covered with skin, but on the upper flat surface the skin was absent, and the appearance given was that of folds of delicate mucous membrane intensely congested, having a purplish hue. This was doubtless an outgrowth from the coverings of the spinal cord. About the centre of this rose there was a depression, from which a few drops of clear liquid frequently escaped.

The muscles of the front of the child's legs and thighs were so much contracted that the legs were constantly held in front of the chest, with the toes almost touching the shoulders. They could be drawn down nearly into a line with the body, but, when let go of, sprang back into their strange position. The knees were so drawn that they bent forwards instead of backwards, the legs and thighs almost forming a semicircle with the convexity at the back of the limb. The toes of each foot were forcibly drawn up towards the ankle, the heel being thus forced down. On one side the toes were strongly turned inwards as well as up, and on the other they were as strongly turned outwards and up.

The anus was pouting and patulous, and fæces were passed frequently and in large quantities.

The child took milk heartily, and seemed to flourish for a week, when, without any unusual escape of cerebro-spinal fluid, or any convulsion, it quite suddenly got cold, seemed to be in severe pain, and died. Unfortunately, there was no chance to examine the body after death, and to preserve its singularly contorted form.

ST. PAUL, MINN., January 28, 1875.

SULPHATE OF QUININE IN PREMATURE LABOR.

BY HARVEY L. BYRD, M.D.,

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THE following case, having interested the writer to a considerable extent, illustrating and establishing, as it does, more completely the antiperiodic action of one of our most esteemed and reliable remedies, is deemed of sufficient value and importance to the profession at large to warrant its publication in the pages of the *Medical Times*. There has appeared from time to time a disposition on the part of some practitioners to attach parturient properties to the salts of quinine, and particularly the sulphate; and cases have been reported in order to strengthen the idea of its action in that regard. The weight of professional opinion has not preponderated in that direction, however, as may be seen in the daily prescription of this drug in malarial fevers, and, in fact, in all diseases of marked periodicity in their character, without fear of its exerting injurious action on the uterus in regard to gestation. So far from any apprehension of its producing uterine contraction, it is often prescribed for the purpose of lessening irritability of that organ. In a professional experience extending over a period of more than thirty years, in all forms and varieties of disease in which quinine is indicated, I have prescribed it alone, or in combination with such other articles as seemed necessary, not only without injury to the pregnant female in all stages of gestation, but with marked and positive advantage in those of threatened abortion and premature labor. With this experience in regard to its *modus operandi*, no difficulty was encountered in selecting it as the leading article in the treatment of the particular case soon to be mentioned.

In an office-consultation with Mr. D., one of the most reliable and enterprising merchants of Baltimore, the following facts were elicited in regard to his wife. She was represented as being in the

seventh month of utero-gestation, and as having had seven successive premature deliveries at the eighth month of pregnancy; and all the children died at or a few hours after birth, except one, which was kept alive, with great difficulty, until the eighth week.

Having been thus unfortunate under the care of other physicians, it was thought that a change to another might give "better luck" this time, and, possibly, the unfortunate eighth-month habit broken up. Learning thus much from Mr. D., his wife was visited the following day, July 12, 1874. She was found to be an intelligent, healthy-looking young lady, of about thirty-two years, sanguine temperament, medium height and size. She stated that in previous pregnancies she had been carefully attended by her physicians, but did not know much of the treatment pursued, beyond the general facts that she had been constantly kept in a recumbent or reclining position for three or four weeks prior to her expected confinements, and almost continuously under the influence of morphia or opium during those periods. This was the general course pursued in all her pregnancies after the second, with the results above stated. The following constituted the course of treatment recommended and continued with the most satisfactory results. Three weeks in advance of her usual mishap, she was directed to surrender the entire care of her domestic affairs into the hands of another, to confine herself to the limits of her bed-chamber, and as much as possible to her bed.

℞ Pulv. aloes Socot., ʒi;
Pulv. rhei, ʒss;
Podophyllin., gr. v;
Bicarb. sodii, gr. vi;
Ext. nuc. vom., gr. iv;
Ol. menth. pip., gtt. i.

Make thirty-five pills. S.—One pill at bedtime to keep the bowels open. During the day, and commencing at 5 A.M., one of the following pills every four hours, until *quininism* is induced, or until four have been taken: ℞ Sulph. quiniæ, ʒss. Make eight pills. Should nervousness occur during the day,—to which she was somewhat subject,—valerianate of quinine in one-grain doses to be substituted for the sulphate. When restless or disinclined to sleep at night,

℞ Bromide potassium,
Hydrate chloral, aa ʒij;
Water, ʒiv.—M.

S.—Take a dessert-spoonful as occasion requires.

The foregoing treatment was continued with little variation, except an occasional dose of compound spirit of lavender when nervous symptoms were not relieved by the other remedies, until about a week after the dreaded crisis was safely passed, when she was permitted to read, sit up, and take gentle exercise about her room. At the commencement of the thirty-eighth week from her last menstruation, labor began, and progressed normally through all its stages, resulting in the safe delivery of Mrs. D. of a healthy and perfectly-formed female infant, of about eight

pounds avoirdupois, in ten hours after it began. This little miss had scarce emerged into the world ere she gave unmistakable evidence of her ability to maintain a separate existence, and probably no mother ever experienced more joy, or had greater hopes inspired by the cry of her new-born babe, than the happy mother on this occasion.

At the date of this writing the child is three months old, and is growing and prospering to the entire satisfaction of all parties concerned.

It is proper to remark, before closing this brief account of an unusually interesting case, that Mrs. D. was in no wise restricted in her diet during the treatment, except in regard to such articles as experience had proven indigestible.

366 N. FREMONT STREET, Jan. 26, 1875.

NOTES OF HOSPITAL PRACTICE.

ALLGEMEINES KRANKENHAUS, VIENNA.

CLINIC OF PROF. KARL BRAUN, NOV. 5, 1874.

CAULIFLOWER EXCRESCENCE—PORTION OF PERITONEUM REMOVED.

GENTLEMEN,—The patient we introduce to you to-day is a married woman, æt. 32, and has borne two children. Her physical appearance is good, and no one would imagine, judging from it, that she was suffering from any serious cachexia. Yet she is laboring under a difficulty which, if not promptly met and treated, will beyond a doubt be fatal in its results.

She tells us that for a period of five months she has been constantly losing blood, not in great quantity, it is true, yet there has been a steady drain upon her system, which threatens sooner or later to undermine her strength; and it is our purpose to-day to make an examination of the trouble, and to do something for its removal.

A vaginal examination reveals, situated upon the anterior lip of the cervix more especially, yet extending nearly the entire distance around it, a new growth, which we have no hesitation in pronouncing, from the peculiar sensation it imparts to the fingers, the hemorrhage which accompanies it, and the entire history of the case, to be an instance of the so-called "cauliflower excrescence."

What, in such a case, should be our treatment? Experience has conclusively proven that nothing short of its radical removal will be of any value. Any attempt short of this will result in a failure, and the condition of the patient subsequently will be even worse than at present. Here it is always better to cut away too much tissue than not enough. A portion of the peritoneum may be removed, proper care being taken in the subsequent treatment, and yet no injury result. In the very many cases here operated upon in the past twenty years, but a very small percentage has been lost, while in many of these the peritoneum has been cut. I operate every year fifteen or twenty times for this difficulty, and often remove a portion of the peritoneum so large that my assistants scratch their heads and say, "He has gone too far this time;" but as they grow older and see these operations again and again repeated with most favorable results, they learn better. The surgeon would object to such an operation, involving the opening of the peritoneal sac, but the gynecologist, who operates in this region much oftener, knows better what can be done.

As to the instruments used in this operation, I have

little at present to say. The operator will be guided by the conditions of the case, or, it may be, by taste, in choosing them. I prefer in these cases the use of the galvano-caustic to all other means, and place the wire so that it shall pass through *perfectly healthy* tissue.

[The operation was here performed, and a large portion of the cervix amputated, the wire passing completely behind the growth, which was about as large as a hulled walnut, removing a portion of Douglas's cul-de-sac.]

You will observe, gentlemen, as this specimen passes around the class, that I have removed quite a considerable portion of peritoneum. It is better to avoid doing this, if possible. I do not think this case required it, and had not intended to touch it, but the folds of the posterior wall of the vagina deceived me. Our subsequent treatment will be very simple. We will use a glycerin tampon, taking care not to introduce it so far that there would be danger of its passing into the abdominal cavity; and no injection whatever will be allowed. The patient will be required to lie as much as possible on her back, the severed tissues being thus thrown more nearly into accurate juxtaposition, and the healing process will be proportionately more rapid.

Nov. 14.—Patient doing very well. There has been no rise in temperature since the operation.

VERSION FOLLOWED BY CRANIOTOMY.

We introduce another patient to you, gentlemen, in labor. She is 23 years of age, strong and healthy; is a primipara; has had strong labor-pains since yesterday, and she is brought into the clinic because my assistant informs me he is not satisfied with the progress the case is making. We will make a vaginal examination, to ascertain in what may be found the difficulty. We find here on introducing the index-finger a conjugate diameter less than that of the normal pelvis, measuring two and three-quarters or at most three inches; a cervix very much elongated, measuring four inches in length, and the external os as yet very imperfectly dilated; a head large and high up, not yet descended into the pelvis, and having the left occipito-anterior position.

We find here, then, conditions which demand our assistance, without which there may occur paralysis or inflammation of the uterus or its rupture. There are here as yet no signs of a rupture of the cervix; but that may take place under conditions which are not usually supposed capable of producing a rupture. I have had a case of premature labor in which rupture of the cervix occurred, the head being only two inches in its biparietal diameter.

I shall here lay the patient upon her right side, and, introducing my left hand, the palm corresponding to the abdomen of the child, endeavor to reach a knee. I find this, however, impossible, and shall introduce my right hand, the patient retaining the same position. I succeed in grasping a foot, and, as you see, bring it down while I pass over it a sling. As the pains again come on I make strong traction on the limb, while my assistant aids me by making pressure on the fundus and sides of the uterus, and we extract as far as the buttocks, when we cease making traction, the gradual extrusion of the body being very necessary for the proper expansion of the mother's soft parts,—the vulva and perineum. The shoulders now having come to the outlet, my attention is directed to the extraction of the arms. Here I find at once that I am unable to deliver the arms in the usual manner by drawing them downward over the face and breast of the child. Both are drawn upward and behind the head, where they are crossed, giving us an instance we do not often meet with, and in which it very frequently becomes necessary to fracture the arms if we would deliver promptly

enough to save the life of the child. In twenty-five years of practice I have had two cases in which I have fractured the arms for this reason. In such unpleasant and yet occasionally unavoidable accidents, treatment by a plaster bandage is very efficacious, and in a month nothing of the fracture can be remarked. Having brought down the arms, we find the head delayed, and all attempts I can make at extraction by manipulation are unavailing. It is very evident that this child cannot be born alive. The pulsations of the cord have already ceased, and no heart-sounds are to be detected. Delivery, however, must not be delayed, and we will at once proceed to the extraction of the child by means of the trepan and cranioclast. Many affirm that we cannot apply these on the after-coming head; but practice says otherwise. I never apply the cephalotribe in these cases, believing that we have in the *curved* trepan and Simpson's *lengthened* cranioclast much more efficacious instruments. The cranioclast preceded by perforation accomplishes all that is necessary. For ten years we have found this Simpson's *lengthened* cranioclast to give more satisfaction than any other, and for twenty years we have found no trepan so good as the one we show you. The fewer instruments you use, the better. In this hospital we find a necessity for only two destructive instruments, which are those we show you, and they, aided by the hand, prove sufficient for every emergency. Considering that from 1849 until 1856 we had four thousand cases of labor annually, and since 1856 five thousand cases annually, we have had a good opportunity of testing different instruments. The cephalotribe I have entirely abandoned, after a long and faithful trial of it under its various modifications.

Introducing the trepan, I pass it into the cranium through the occipital bone, and, applying the cranioclast, the head is extracted without difficulty.

In these cases I always prefer turning before performing craniotomy, because, when the operation is performed while the head is presenting, the movements of the child in the agonies of death can be very distinctly felt, and it may, and often does, live after being extracted. Turning, however, is not to be readily accomplished in these cases without good assistance; and had I not here the co-operation of experienced hands I would not have attempted it. It may be performed after perforation without risk of injury to the soft parts of the mother.

There has been here no rupture of the cervix, no laceration of the tissues, and no metritis, and we are justifiable in hoping for a rapid recovery. This woman should be placed in a large, well-ventilated, and quiet room, where she will be exposed to no danger of infection from patients suffering from metritis, peritonitis, etc., and in eight or ten days will be rapidly convalescing.

If she should again be pregnant in the future, she should be examined every month during the second half of the pregnancy, and when the child has attained a weight of four or five pounds, or about the thirty-fourth or thirty-sixth week, premature labor should be induced.

Nov. 14.—Patient doing well.

G. WILDS LINN.

RELATION BETWEEN RACHITIS AND SYPHILIS (*The American Practitioner*, February, 1875).—Dr. R. W. Taylor, after considering the relation between these two diseases, says that he is prepared to admit that syphilis may be one of the causes of rickets, but that there is no specific relation between the two diseases; that syphilis may remotely cause rickets by its lowering effects upon the organism, in the same manner that any adynamic influence might produce the same effect.

TRANSLATIONS.

TANNIN IN THE CORYZA OF ADULTS AND CHILDREN.—"You are constantly telling us," it is sometimes said, "of the great progress made in recent times by medicine, and you have not yet found out, from the time of Hippocrates until now, the means of curing coryza." Those who reproach us in this way forget to add that, not wishing, for the sake of curing a simple "cold in the head," to submit to any of the hygienic measures rationally indicated, they demand in reality a prompt means of cure, easy to follow, even while travelling. Even those who cry up infallible specifics most loudly have never proposed anything more than some palliative, and these, from ammonia to iodine, are always in a liquid form, just the shape which is most difficult and inconvenient to carry about. In general, all these preparations are far from compensating by their utility for the inconvenience of their employment.

For ourselves, who do not intend to change our habits or suspend our business any longer for the sake of a coryza, every time we have been attacked by our enemy we have put the question upon a practical footing, and have endeavored no longer to cause the disease to disappear instantaneously by some sovereign *specific*, but to diminish its principal inconveniences and to render its attacks in some degree tolerable.

Observe how we have attained our object. The first symptoms of coryza are congestion of the mucous membrane of the nasal fossæ, with dull headache, heat in the upper part of the face, sleepiness, dryness of the mouth and throat, more noticeable when swelling of the mucous membrane closes the nasal passages completely, obliging the patient to breathe with the mouth constantly open. Such are the principal tortures of a "cold in the head," and for which relief is most urgently demanded. It is evident that if an energetic contraction of the mucous membrane can be brought about, so that its volume shall be diminished, this desideratum can be attained. In short, when the air finds a free passage through the nasal fossæ, the frontal headache and the lachrymation will disappear, and at the same time the dryness of the mouth, which may then be kept closed.

In addition, the mucous membrane being compressed like a sponge, makes easy the expulsion of those fluid mucosities which cannot be detached under ordinary circumstances without great effort.

We may obtain these results constantly by the use of tannin made into a powder after the following formula:

R Tannin., gr. $\frac{3}{4}$;
Pulv. iris,
Pulv. althææ, āā gr. xv;
Tinct. vanillæ, gtt. iv.—M.

To be taken in small pinches three or four times a day, or oftener if necessary.

Coryza, which in the adult merely presents inconveniences easy to support, becomes, on the other hand, a serious matter when it attacks an infant. Here, as all physicians know, the occlusion of the nasal fossæ may directly threaten life, because rendering efforts at suction of the breast impossible. It is necessary to act immediately; and it must be confessed that the means heretofore recommended have proved totally inefficacious. Observe our method of combating the danger. After having prepared the following ointment,

R Tannin., gr. $\frac{3}{4}$;
Axungia, ʒi ʒi;
Tinct. vanillæ, gtt. v.—M.

we roll between the thumb and index-finger a very small square of paper so as to form a not very rigid

cylinder, which will yield easily to any lateral movements which may be made by the infant while it is being introduced into the nostrils. Then, after having smeared the exterior with the ointment, it is introduced deeply into each nasal fossa.

In this manner we often bring about one or two very salutary attacks of sneezing, and always the effect just noticed as occurring in the adult, that is to say, free circulation of air in the nasal fossæ following the subsidence of swelling in the mucous membrane. The parents are always struck with the rapidity with which the infant returns to the breast, thanks to the success of this little manœuvre. It is because we are convinced that we have rescued more than one infant from imminent danger that we lay stress upon the process which has demonstrated to us that, in the medical treatment of infancy, it is the trifling appliances which often produce the best effects.—Dr. D., in *Tribune Médicale*, Jan. 17, 1875. X.

THERAPEUTIC NOTES.

MASSAGE IN ABSCESS OF THE CORNEA.—In the *Independencia Médica*, of Barcelona, Dr. Osio recommends the application of massage in abscess of the cornea. He says that every one unconsciously practises it when rubbing the eyes. At the Ophthalmological Congress of 1872, held in London, Donders called attention to the practice as one that had yielded him excellent results. Dr. Osio has employed massage of the cornea with success in certain diseases of the eye. He has more recently combined the use of aqueous vapor with massage. He employs the following method: An apparatus charged with an infusion of chamomile is placed before the patient's eyes (which have previously been covered with a double layer of fine muslin) at such a distance that the vapor reaches the eyes at a temperature of from 90° to 100° F. At the same time massage of the eye should be performed with the fingers over the muslin, rubbing it up and down, from side to side, and finally by a circular movement pressing upon the centre of the cornea. At intervals the apparatus may be brought nearer, so that the eyes may for a few moments be subjected to steam of a higher temperature than that indicated. This vapor-bath should be continued for a half or three-quarters of an hour, and during this time the massage should be repeated from eight to ten times, with a duration of from one to two minutes upon each occasion.

MASSAGE IN SPRAINS.—M. Fontaine writes (*Archives Méd. Belges*, iii., 1874) on the use of massage in sprains. He has himself had great success. M. Fontaine first covers the limb with oil, and the part is rubbed with one or both thumbs, in gentle movements, from the extremities upwards, following, in general, the direction of the muscles and tendons. The affected, painful spot is rubbed gently, but the healthy neighboring parts more energetically, and the muscles at times thoroughly kneaded. This manipulation lasts from a quarter to half an hour, and is repeated three times daily. In the interval the limb is raised and bandaged. M. Fontaine thinks that the massage acts by spreading the blood extravasated (through rupture of vessels) over a large surface, and thus promoting absorption. But, whatever may be the *modus operandi*, M. Fontaine has obtained good results in sprains by the application of massage.

ACCORDING to *The Doctor*, February 1, a death has occurred in France from the intravenous injection of chloral.

CHLORAL AS AN APPLICATION IN GANGRENE.—M. Dujardin-Beaumetz communicated to the Société des Hôpitaux, at a recent sitting, an account of the case of a young man eighteen years of age, who applied for relief for spontaneous gangrene affecting the hand and fore-arm. In order to dissipate the odor, and to avoid the danger of septicæmia as far as possible, M. Beaumetz had the affected limb kept constantly in a bath containing one part chloral to five hundred parts water. At the end of eight days the arm was amputated, with a favorable result.—*Medical Press and Circular*.

ANTIDOTE FOR PHENIC ACID.—The editor of the *Pabellon Médico* strongly commends M. Husemann's procedure in regard of employing the alkalies and alkaline earths, and more especially the saccharate of lime. This is readily prepared by adding five parts of caustic lime to a solution of ten parts of sugar in forty of distilled water, and leaving it to digest ten days before filtering.—*The Doctor*.

TYPHOID FEVER.—M. Valette read before the Société de Médecine a *résumé* of twenty-one cases of fever treated by Brandt's method of cold immersion. All the cases did well. Among the rest was a child of eleven, in whom typhoid fever had supervened on whooping-cough. The whooping-cough disappeared, but returned during convalescence.—*The Doctor*, from *Lyon Médical*.

LOCAL ANÆSTHESIA IN CASES OF LABOR.—Dr. Friedländer relates (in *Deutsche Klinik*, No. 30, 1874) that, being called to a woman who was suffering intolerable pain in the sacral region, he resorted to an application of chloroform (one part) and ether (two parts), after having vainly tried several other means. He obtained by this means total cessation of all pain until perfect delivery. After having successfully tried the same application in a great many cases, he recommends its employment as an anodyne for the pains of parturition.

IN RACHITIS.—

R Calcis phosphatis, ʒi;
Sodii carbonatis, ʒii;
Sacch. lactis, ʒiii.—M.

Two or three pinches of this with the child's food three times a day, combined with cod-liver oil, saline baths, frictions, etc.

ALKALINE CHLORO-ALBUMINATE OF MERCURY FOR HYPODERMIC USE.—

No. 1.

R Hydrarg. chlor. corros., ʒvj ʒij;
Ammon. chlorid., ʒiv;
Sodii chlorid., ʒi;
Aquæ destillat., ʒiv.

Dissolve and filter.

No. 2.

Dissolve the white of an egg in 4 oz. distilled water; filter.

Mix the two solutions, and filter; ℥xii contain about 1½ gr. of the mercurial salt.

A NEW POULTICE.—Carrageen is recommended by a committee of the French Academy as a substitute for flaxseed meal in poultices. It should be cut into thin plates of the size required, and when steeped in hot water it softens and swells in a few minutes. This new poultice has been tried by MM. Demarquay, Gosselin, and Verneuil in their respective hospitals, and they have pronounced it to be far superior to the linseed poultice; it keeps moist for more than sixteen or eighteen hours; it does not slip; is inodorous, does not readily ferment, nor does it soil the linen or bed of the patient.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION.

WE desire to call attention to a letter in another column, which, from its intrinsic character, as well as from the high position of its author, and his knowledge of the important subject on which he writes, deserves a most careful consideration. We were somewhat surprised at the statement that the *Philadelphia Medical Times* had pronounced the last meeting of the American Medical Association a failure, as we were not aware of having used language warranting such a deduction. On consulting our file, the strongest expression we can find is, "We deny emphatically that the convocation was in any true sense representative of the American medical profession." We are under obligations to Prof. Gross for confirming this, for surely no one will claim that a body in which there were "very few delegates from the Eastern, Middle, or Northern States" represented the whole country. The meeting did, in truth, represent a *section* of the country, and failed therefore in being *national*. If, in the play of Hamlet, Hamlet be not on the stage, can Othello, Juliet, Romeo, King Lear, one or all, atone for the omission, behave they themselves never so nobly? It makes little difference whether five hundred or five thousand physicians were present, if they were all or nearly all from one portion of the country. We are also obliged to Prof. Gross for confirming our expressions as to one of the great causes of this absence of national

character: namely, the want of a central place of meeting.

There is a hyperæsthesia to criticism which may be the outgrowth of a sense of weakness or failure, and may be dependent upon the sufferers not being veterans in discussion. To the existence of such hyperæsthesia we attribute the feeling which, according to the personal statements of an ex-president of the Association, has gone abroad, that the *Philadelphia Medical Times* is hostile to the American Medical Association, although we have over and over again given in our adherence to it. We are not able to express ourselves more clearly than we did last spring (vol. iv. p. 555), when we wrote, "We are of those who believe in the necessity of some *central* organization which shall, so far as possible, represent the profession in the United States, and we intend, therefore, to uphold the American Medical Association as much as we are able." He is a very frisky logician who reasons that a journal is opposed to an institution because it criticises its management.

We believe that, in order for the American Medical Association to be *national* in its character, great care should be exercised in selecting its places of meeting, and that in order for it to be *respected* at home and abroad it should not yearly publish a mass of matter most of which any respectable editor would at a glance consign to the waste-paper basket.

We are as proud of our country and of its achievements as is any one, but have never felt that we were to be elevated either in our own respect or in that of our transatlantic friends by proclaiming this pride. Boys and young nations are very apt to brag of their achievements. We do not see why it is more necessary for us to wave the starry banner and shout hosannas over the American people than it is for the London *Lancet* or the *British Medical Journal* to act as showman to the British Lion. We had thought that at least our learned professions had outgrown this weakness.

The American Medical Association, as well as the American profession, is to be advanced not by studying its excellencies, but by trying to determine and remedy its defects, and he who points these out is a far better friend than he who smothers progress with overflowing praise. One of the reasons the British Association is so much more successful than ours, seems to us to be because it does not waste its funds in publishing volumes that are a byword of contempt with critics both public and private.

We are by no means through with this subject; but, as the space allotted for editorial is full, we

shall next week offer in all humility to the consideration of the leaders of the American Medical Association a few suggestions as to the causes of that want of success in sustaining a thoroughly national society which, according to the statements of Prof. Gross, seems recently to have attended their efforts.

LEADING ARTICLES.

THE USE OF COLD IN FEVER.

NO. II.

THE clinical evidence in regard to the use of cold in fever may be looked at in two different ways. Thus, we may consider the assertions and results of individual observers, who have seen large numbers of cases of fever and used the method faithfully, or we may weigh the sum total of the experience of all who have written upon the subject. At first sight it may appear that the latter is by far the best course to pursue; but it must be borne in mind that the treatment is one opposed to the ordinary medical prejudices, that its efficient carrying out involves so much labor and attention as to be almost impossible to those who disbelieve in its usefulness, and that those physicians who claim most for the method affirm most strongly that to do much good it must be practised very vigorously and steadily.

These things being so, it seems wisest to look at the evidence from both points of view.

M. Franz Glénard affirms (*Glasgow Medical Journal*, 1874) that there have been from six thousand to eight thousand cases of typhoid fever treated by the use of cold in Austria, Prussia, and Russia, with an average mortality of from 4.5 to 7.6 per cent.; the previous mortality, under the old expectant method, having varied from 18 to 25 per cent. If these figures are correct, they are decisive. Where he gets them from, however, I do not know. All the evidence that I have met with is summarized in the following table. Unfortunately, it is not always easy to decide whether a German is writing about typhus or typhoid fever; but where it is not mentioned the probabilities are that the cases are in great part, if not wholly, enteric fever:

Table showing the Results of the Cold-Water Treatment in Typhus and Typhoid Fever.

NAME OF REPORTER.	PLACE.	NUMBER OF CASES.	MORTALITY, PER CENT.	REMARKS.
Jürgensen.	Kiel.	160	3.1	Previously 15.4 per cent. Typhoid fever.
Petri.	Laubbach.	31	3.2	
Liebermeister.	Basel.	1121	8.2	Previously 26 to 30 per cent. Treatment very rigorous. Typhoid fever.
Mosler.	Greifswald.	71	7	

NAME OF REPORTER.	PLACE.	NUMBER OF CASES.	MORTALITY, PER CENT.	REMARKS.
Mosler.	Greifswald.	92	9	Typhus exanthematicus, previously 50 (?) per cent.
Becher.	Ostpreussen.	17	24	Typhus exanthematicus, previously, on an average, 10 per cent.
Brandt.	Stettin.	187	2.1	Private practice.
"	"	84	10	Military Hospital. Previously 30 per cent.
Goden.	"	24	20.8	
Stohr.	Würzburg.	120	6.6	Previously over 20 per cent.
Drasche.	Vienna.	40	10	Year before 16.5 per cent.
Ziemssen.	Erlangen.	32	9.4	Formerly, with bad cases, 30.2 per cent.
Stieler.	Munich.	226	5.6	Formerly 12.15 per cent.
Pastau.	Breslau.	246	11.8	Typhus exanthematicus. Without baths, mortality 16.5 per cent.
Popper.	Prague.	20	5	
Riegel.	Würzburg.	156	4.4	Only serious cases included. Almost every fatal case came in too late for baths to do good.
Götz.	Prague.	54	5.5	Typhoid fever. Other cases treated at the same time, expectantly, 15.4 per cent.
"	"	50	18.8	Typhus exanthematicus.
Scholz.	Bremen.	125	4	Typhoid fever.
Wunderlich.	Leipsic.	155	7	Typhoid fever. Previously 18.1 per cent. out of 1178 cases.
Zaubzer.	Munich.	356	5.6	Typhoid fever. Previously 17.6 per cent. out of 701 cases.
Bauer.	"	87	7	Typhoid fever. Previously 11½ to 16 per cent.
Duchek.	Vienna.	60	28.3	According to Brandt, this high mortality depended upon the treatment having been imperfectly performed.
Krofft-Ebing.	Rastatt.	105	25.7	Only bad cases. Previous mortality 34 per cent.
Wille.	Rheinau.	59	19	
Stecher.	Claye.	146	8.2	
Schönheiden.	Dammartin.	82	3.6	
Pfeifer.	Weimar.	58	5.2	
Leube.	Ulm.	47	19	Mild epidemic.
Böhm.	Niederbronn	131	11.5	Typhoid fever, among French prisoners of war. Baths of moderate temperature used.
Gersauer.	Vigy.	97	6.18	Typhoid fever. Military hospital.
Drasche.	Vienna.	55	19	Typhoid fever. Mortality on expectant treatment 23.91 per cent.
Merkel.	Nuremberg.	41	2.2	Typhus.
Loebel.	Vienna.	87	18.4	Typhoid fever.
"	"	105	28.6	Typhus fever. The treatment in this and in the preceding case was not thoroughly carried out; the patients mostly receiving only three baths a day.
Glénard.	Lyons.	52	0	Typhoid fever.
Schmidt.	Erlangen.	56	0.18	Several fatal cases not counted, because not received until the fifteenth day, and, therefore, too late to test the treatment; they bring the total mortality to 4.14 per cent.
Heubner.	Leipsic.	72	0.14	
Binz.	Versailles.	190	2.1	Soldiers. Mostly, if not all, typhoid fever.
Zeroni.	Mannheim.	72	18	Soldiers.
Valette.	Lyons.	21	0	Typhoid fever.

This table is of such a character that any lengthy discussion of it seems unnecessary. It is, however, allowable to call attention to the facts that the failure of the method at Vienna is, by the upholders of it, very

justly attributed to the inefficient carrying out of it, and that in some other instances the apparent high mortality is due to none but the most serious cases being included, or to the patients having been soldiers, worn out by the hardships and toils of a severe campaign.

When the evidence furnished by single observers is noted, the results are even more astonishing than that of the above table; so that although the aphorism of Brandt, as quoted and endorsed by Glénard,—“every enteric patient regularly treated from the commencement by cold water will be free from complications, and will recover,”—can scarcely be accepted, yet the great merit of the method cannot be gainsaid.

Prof. Liebermeister has employed the cold-water treatment on a larger scale than has any other individual. At the hospital at Basel, up to the year 1865, 1718 cases of typhoid fever were treated upon the expectant plan, with a mortality of 27.3 per cent. In 1865, Dr. Liebermeister introduced the use of cold bathing in a timid, inefficient manner, and reduced the mortality, in 982 patients treated, to 16.2 per cent. In 1866 he commenced the vigorous regular employment of the method, and reduced the death-rate, in 1121 patients treated, to 8.2 per cent. Prof. Liebermeister himself criticises very closely, in the recent *Encyclopedia of Medicine*, these statistics, and raises the mortality, by excluding trifling cases, to from 10 to 11 per cent.; but, after the anti-pyretic treatment has been even unjustly dealt with, the statistics still show that the mortality under the cold-water treatment is not half what it formerly was. Further, a certain proportion of cases are always admitted to the hospital moribund, too late for any human agency to be of avail: these cases, of course, maintain the same proportion under any treatment; they really constitute a large part of the deaths seen in the cold-water treatment, so that if they were eliminated from both sides the death-rate “under the anti-pyretic plan would be but a small fraction of what it would be under the other.”

In hospital practice the patients are very rarely received upon the first day of the attack, and very frequently do not enter the wards until the third week, so that the statistics which are included in the above table, or those given by Prof. Liebermeister, favorable as they are to the new treatment, only express a portion of the truth. If the good effected be so great when the remedy is often not applied until the second or third week, much more is to be expected when it is employed faithfully from the moment the temperature becomes elevated.

Accordingly, Brandt is said to claim that if the case be properly treated, from the onset of typhoid fever, death will never occur; and it is stated (London *Lancet*, January 23, 1875) that out of 259 cases he has had 259 recoveries. I have not had access to the original papers of Dr. Brandt, and cannot, therefore, analyze his statistics; but Glénard (*loc. cit.*) is just as enthusiastic; he states, “You will not find in the five or six thousand cases of typhoid fever treated by this method one single unsuccessful among those which have been submitted to it since the beginning of the disease.”

It is not necessary to endorse this statement as absolutely true in order to accept the proposition that the extreme value of systematic cold bathing in typhoid and typhus fever has been so abundantly demonstrated that no excuse remains for the further neglect by physicians of this most important measure. The immediate effects of the bath upon the symptoms of the disease and upon its duration will be considered in the next article.

H. C. W.

CORRESPONDENCE.

LEIPSIK, January 16, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Last evening, January 15, Dr. Angelo Mosso, of Turin, delivered an address before the Physiological Society here, upon “A New Method for Measuring the Alterations in the Dimensions of Blood-vessels in the Living Man;” an abstract of which I send you, as I am sure that the attention and interest of many of your readers will be excited by it.

Dr. Mosso was last year occupied in observing the alterations in the size of certain organs, such as the kidney, which take place when, after their removal from the body, an artificial circulation is brought about in them. To this end he made use of a vessel with three tubulatures. In this the organ under examination was placed, and while two of the apertures allowed the ingress and escape of the circulating fluid, in the third was inserted an upright tube which would show the expansion and contraction of the organ through the medium of oil or water, with which the vessel was filled, and which rose or fell in the perpendicular tube.

This method of marking the expansion was attended by the drawback, that an increase in the height of the column in the tube exerted a perceptible pressure upon the expanding organ; and to avoid this he constructed an apparatus which he has since been able, with remarkable success, to turn to advantage in his investigations and experiments upon the living man.

This apparatus, which Dr. Mosso has named plethysmograph, consists of two distinct portions: one, by means of which the change in volume of the extremity under examination can be transformed into a measurable motion; the other, serving to record this motion without in any way influencing the pressure upon the surface of such extremity.

The first is a tin vessel large enough to receive the fore-arm comfortably (it can, of course, be made of a proper size for leg or thigh), armed with two tubulatures and closed near the elbow by an india-rubber ring, which effectually prevents the escape of the water with which it is to be filled. One of the tubulatures is at the end, and is connected with a flexible tube which runs to the graphic portion of the apparatus, and the other, on the upper side, is used to fill the case completely with water. In it a thermometer is usually inserted through the cork which closes the case completely. The tube

from the distal end is conducted, as nearly level as possible, to what may be termed a glass bucket, which hangs exactly counterpoised in a mixture of alcohol and water, from a ribbon running over a pulley. To the other end of the ribbon is attached the pen which is to trace the expected curve upon a rotating drum.

The arm having been introduced, and its owner placed in a comfortable sitting position, the case is completely filled with water, as is also the tube which runs from it. Enough water is also in the bucket to cover the end of this tube.

If now the volume of the enclosed extremity increases from any cause, water is pressed out of the case through the tube into the bucket, which becomes heavier and descends, thereby causing a motion of the pen in an upward direction. If, on the other hand, the volume of the extremity diminishes, then the water in the bucket is driven back to the case by atmospheric pressure, and, the bucket itself rising, a motion in the opposite direction is communicated to the pen.

The various difficulties which arose in the path of the inventor of this apparatus, not the least of which were the fact that the bucket underwent a progressive loss of weight as it descended into the fluid under it, and the necessity of providing against an overflow from the necessarily small bucket in case the extremity expanded very much, have been most ingeniously surmounted, and the apparatus as exhibited last night before the Society worked admirably, as it has done during other experiments which I have witnessed.

Besides exhibiting his apparatus, from my necessarily imperfect description of which I trust some idea may be gained, Dr. Mosso showed a number of tracings taken under different circumstances, and from these and his remarks it seemed plain that he had devised a means for studying the increase in volume of the blood-vessels of the extremities, and, through observations upon these, of gaining information with regard to the condition of the blood-vessels of the brain,—information of value not only from a physiological stand-point, but also in the solution of some questions in experimental pharmacology, and perhaps in clinical medicine. In passing, it is worth while mentioning that Prof. Wunderlich, who was present last evening, has already taken steps towards some investigations with the instrument in the hospital.

The tracing obtained from a man who sits perfectly quiet, and with his mind in as placid a condition as possible, is, so to speak, a straight line, varied at regular intervals by the respiration, and at irregular intervals by certain unexplained and small changes of volume which are not coincident in both arms. The latter are termed "spontaneous" movements, and both are readily allowed for in observing the curves, as they present distinctive appearances.*

When, now, the apparatus is in working order, the blood-vessels are observed to change their volume in the most remarkable and hitherto unsuspected manner.

Volatile substances, as ammonia, held under the nose for a moment, as well as touching the other hand with a piece of ice, caused a decided alteration in the amount of water in the case. In each instance the volume of the arm decreased. Besides these phenomena which were shown, Dr. Mosso showed the tracings and described some of the phenomena which showed themselves when the subject of the experiments was Dr. Pagliani, a friend who on several occasions submitted himself to what must certainly be a somewhat wearisome process.

In Pagliani's case, a cup of coffee was sufficient to cause a decided contraction of the blood-vessels of the arm, which lasted for three-quarters of an hour, while, on the other hand, on one occasion, while he slept the arm increased very greatly in volume, and the "spontaneous movements" were much greater.

During this sleep, the barking of a dog, the striking of the clock, and a slight touch upon the cheek, caused a temporary, but not complete, reduction of volume. On waking, Pagliani remembered nothing of the sounds or the touch. Before his waking the vessels again contracted, and when he was fully conscious they had resumed their original condition. The speaker drew from this and another similar experiment the conclusion that consciousness is only possible when the blood-vessels contract strongly, and the blood streams from the periphery to the centre.

On one occasion, when Dr. Pagliani was perfectly quiescent, the sudden though quiet entrance of Prof. Ludwig caused a most marked contraction of the blood-vessels of the arm; and indeed when Mosso himself or others of the students in the Physiological Institute were the subjects of experiment, this same contraction took place, showing, as the lecturer said, when one considers the close and friendly, one might almost venture to say familiar, relation in which Prof. Ludwig stands to his pupils (thereby eliminating alarm or uneasiness from the question), with what veneration and respect he was regarded by them, as in silence their very blood-vessels drew together to do him honor.

Invariably it has been found that the slightest mental effort is accompanied by a reduction in the volume of the arm; a comparatively simple sum in multiplication producing a very marked effect.

In connection with this point, Dr. Mosso related a story of his experience in Turin with a friend of a literary turn and a good classical scholar. The latter entered his room while he was occupied over his apparatus, and asked of what possible use such an affair could be. "It will tell whether you are as well up in Greek as in Latin," replied Mosso, and thereupon, copying off a page of Latin and one of Greek, he put his unfortunate friend into the machine, and asked him to read both pages. The Latin came first, and the arm-volume remained stationary; but when the Greek was begun there was a sudden and great alteration, the arm-volume diminishing.

As may be imagined, the address was exceedingly interesting; and it is a matter for congratulation that

* The pulse also makes a slight impression.

Dr. Mosso is still prosecuting his investigations, which it is to be hoped will finally see light in an extended and complete form. I should not omit to say that the alterations caused by muscular contraction are only avoided through the intelligence of those upon whom the experiments are made; but it is quite safe to "stigmatize" those who have been the subjects here, as Helmholtz did his friends, as persons of perhaps more than ordinary intelligence; besides, the alterations of volume from muscular movements can be readily recognized, and the experiment repeated or allowance made for the error.

Dr. Mosso's address was attentively listened to, and warmly received. He mentioned many experiments with various drugs; among others, one with nitrite of amyl, when there was a slow but perceptible contraction[?] of the vessels. This, however, and other similar observations, he will be able, he trusts, to work up more fully later. In this hope he is supported by those whom he yesterday addressed, all of whom seemed convinced that the new plethysmograph will be found a valuable aid to scientific research, especially in the hands of so careful an investigator as its inventor.

H. B. HARE.

AMERICAN MEDICAL ASSOCIATION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

THE object of this communication is to call attention to the American Medical Association, whose twenty-sixth annual meeting will take place at Louisville, Kentucky, on the first Tuesday of May next. Instituted in 1847, through the influence and exertion mainly of one man,—Prof. Davis, then of Binghamton, and now of Chicago,—the Association has had, if not a brilliant career, certainly a very satisfactory one, despite the numerous attempts, private and public, which have been made from time to time to disparage and dishonor it. I express this conviction without the slightest fear of successful contradiction; for I profess to have some knowledge of its history, of its proceedings and transactions, and of the men who have been connected with it, either as members or officers. Of the latter there is a long list of names of which any medical association might well be proud; men who have illustrated their profession by their labors and writings, and have added lustre to their age and country. The meetings have been, for the most part, well attended. During its session in this city in 1872, nearly eight hundred delegates were present; and last June, at Detroit, there were upwards of five hundred, and it is perfectly certain that if a more central point had been selected, the number would have been much larger. As it was, there were very few delegates from the Eastern, Middle, and Northern States. Nevertheless, the meeting was a highly respectable one, not only in relation to members but also in regard to talent, learning, and scientific attainments. What more especially impressed me was the great number of elderly, gray-headed men present on the occasion, men who had come from great dis-

tances to take an active part in the proceedings of the Association and to show their interest in its welfare and prosperity. Another circumstance which could not fail to strike every spectator was the decorum which characterized the proceedings of the meeting. The sections accomplished a great deal of work, and the discussions in most, if not all of them, were animated and interesting. As respects the social aspect of the meeting, nothing could have been more gratifying. The citizens of Detroit literally vied with one another to make the occasion one of high social enjoyment. Their hospitality was absolutely unbounded, and will long be remembered by every member of the Association.

In the face of all these facts, I was not a little surprised last summer when I saw an editorial statement in the *Times* that the meeting had been a failure, inasmuch as, it was alleged, it did not represent the American medical profession, owing to the absence of many of its best and most distinguished members. This, it seems to me, is begging the question. No rational person would expect that all the most prominent members of the profession would attend every meeting. Philadelphia, Baltimore, New York, and Boston, for example, were all poorly represented. Many of the great lights in all those cities were absent; and you, yourself, remained away, snugly ensconced behind your editorial tripod, or, it may be, engaged upon some experiment intended to elucidate some obscure point in the physiology of the nervous system, or the action of some article of the *materia medica*. Why the meeting at Detroit should be denounced because of the absence of those lights passes understanding. Did those men remain away because they felt indifferent respecting the success of the meeting? Was it because they dreaded a journey of six, seven, or eight hundred miles in the heat and dust of summer? Finally, was it because the physicians of the Eastern, Northern, and Middle States supposed they might lose some of their effulgence by contact with the Western and Southwestern members of the profession? Whatever the cause may have been, it reflects no credit upon those sections of the country that they permitted their representative men—*those great lights* of the profession, as you regard them—to remain at home, while their more humble but more active and industrious brethren of the great West were zealously laboring and spending their time and money in upholding an Association which, to say the least of it, has done more in harmonizing, unifying, and socializing the medical profession of this country than all the medical societies, great and small, civic and rural, that have ever been formed on this continent. Taking this view of the subject,—and no unprejudiced man acquainted with it can look upon it in any other light,—is it not our solemn duty to sustain the Association, instead of decrying and undermining it by insinuations of failure, if not actual abuse for any of its short-comings? The old adage, "Give a dog a bad name and you might as well hang him," has a powerful significance here. Some men—certain editors in particular—think it their duty to disparage everything Ameri-

can, and they consider themselves supernally happy if in instituting comparisons between the physicians and institutions of this and other countries, they can push us into the gutter. With such growlers I have no sympathy; and in saying this it is far from my wish to be understood as being blind to our manifold sins of omission and commission. No man, perhaps, feels more sensitive upon this subject than I do. As a teacher for forty years in prominent medical schools, and as a man who has seen much of his profession, I am free to confess that we have much to be ashamed of; and yet, despite this averment, I experience a sincere pride when I reflect that I am an American physician and surgeon; for I ask myself the question, What country on the face of the earth has ever done so much in so short a time in developing its medical profession as my own? What nation has ever produced so many great physicians, surgeons, obstetricians, teachers, authors, and scientists as ours, and in so brief a period?

These reflections bring me back once more to the special object of this communication. The American Medical Association has existed as an active body for a quarter of a century, and now numbers nearly five thousand members, including many of the most distinguished and earnest workers in the profession. Its next meeting is to take place at Louisville, Kentucky, a State which has produced McDowell, the father of ovariectomy; Dudley, the great lithotomist; Short, the learned botanist; Miller, the able obstetrician; and a host of excellent teachers and practitioners equal to any similar number of men in the country. A residence of sixteen years in Kentucky, and an extensive acquaintance with its citizens, afford me the assurance that the Association will meet with a most cordial welcome at Louisville; and to make the meeting a success, or, in other words, what it should be, it is only necessary that the great lights of the profession who absented themselves from the meeting at Detroit should turn out in full force next May. I appeal to the common sense of the profession whether this would not be a much wiser and better plan than to indulge in disparaging remarks, not only in bad taste, nay, let me say, the worst possible taste, but calculated, when seen abroad, to lower us in the estimation of our European brethren, and to humble our national pride.

At the meeting in this city, two years ago, I offered a resolution looking to a radical change in the character of some of our proceedings. I refer to the substitution of addresses in medicine, surgery, and obstetrics for the meaningless reports upon these topics to which the Association was annually obliged to listen, at the expense of much of its time and the annoyance of its patience. At the meeting at St. Louis in 1873, the plan suggested in the resolution was substantially adopted; and yet the address in medicine delivered at Detroit last June was simply a report of the contributions made to our periodical literature the year previously; or, in other words, a summary of some of the leading practical facts developed during the last twelve months. All this would be well enough, if we had not several medical journals the

avowed object of which is to furnish the reader with just such matter. What the Association needs is elaborate, learned, and well-digested addresses in each of these branches of medicine, upon any subject the writer may select, using every effort to make this discourse at once attractive, fresh, and truly instructive. The rule provides that the reading of each paper shall not exceed forty minutes. This is simply absurd, and, therefore, the sooner it is abolished the better.

Much abuse has been heaped upon the Transactions of the Association, of which twenty-five portly volumes have now been issued. That these volumes contain a good deal of rubbish is unquestionable; but it is equally true that they comprise many papers of great value, abounding in excellent material and in finished scholarship. The British Medical Association, now in the forty-third year of its existence, has no such record; and, judging from what I witnessed at two of its meetings, I am bound to declare that our proceedings compare most favorably with those of that famous institution.

I have the honor to be, very respectfully, yours,

S. D. GROSS.

PHILADELPHIA, February 1, 1875.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, FEBRUARY 4, 1875.

THE subject for the evening was pneumonia, its etiology, treatment, etc., and Dr. AUSTIN FLINT was called upon to open the discussion. He said he was not prepared to enter upon an elaborate discussion of the subject assigned him, but would simply indicate some of the points of inquiry that suggested themselves to his mind.

First, he would refer to the diversities which disease presented at different times and places. Our medical progenitors attached more importance to this aspect of disease than we do at the present day. Perhaps the present tendency to accept nothing that cannot be accounted for or explained may have an influence. The disease under consideration this evening, for example, presents great diversity. Pneumonia is a disease which, ordinarily, is attended with no danger to life, yet at certain times and places it assumes a character which renders it one of the most fatal of affections. So in regard to scarlet fever and other diseases.

In the second place, the complications of disease, we find, with our present knowledge, great difficulty in explaining. Whether they are due to differences in degree of the initiatory cause, or to differences in regard to the susceptibility of the system, we cannot easily determine.

Does pneumonia at the present time, as it prevails in this city, present any unusual complications? He, in connection with this inquiry, gave a brief account of three cases which came under his observation within the past month. The first case is that of a young man, aged 30, whom he saw with Dr. Caro on June 18. A few days prior to this date, he was attacked with great pain in side, with high febrile movement, but the doctor could not make out any of the physical signs of pneumonia. Dr. Flint was also unable to discover any of the physical signs of pneumonia at the first consultation. He saw this patient again January 20, and at that

time the lower lobe of the right lung presented well-marked crepitant râles, the febrile movement high, but less than it had been a few days before. On the 21st, he was delirious, but there were no signs of pericarditis. He did not see this patient after this date. He was seen by Prof. Clark. Death took place January 23. The next case was that of a young man, aged 30, of good habits, whom he saw with Dr. Keyes, January 31. The patient presented the signs of pneumonia, with partial solidification of the lower lobe of the right lung. He had high febrile movement, but there was nothing in the case to denote any immediate danger. He met Dr. Keyes a few days afterwards, who said the patient was doing well. On the 25th, he received a note from Dr. K., stating that this patient became violently delirious and died before morning.

The third case was in the person of a woman, 68 years of age, who was seen January 31. She had been attacked three or four days before, and had solidification of the lower lobe of the right lung, and some signs of the same at a point in lower lobe of left lung; the pulse and temperature were not inconsistent with a mild form of pneumonia. This patient died during the night.

Without stopping to follow up the inquiries which these cases suggest, Dr. Flint passed on to the consideration of the different forms of treatment of pneumonia. Statistics do not give very satisfactory results in regard to the advantages or disadvantages of bleeding. He has regarded opium as an important measure of treatment, especially in cases characterized by vigilance, restlessness, and perhaps delirium.

Dr. WM. H. THOMSON made some remarks with reference to the use of cold in the treatment of pneumonia, and read the following report of cases in his charge in Bellevue Hospital during the past month:

Case I.—W. F., native of Germany, aged 40, upholsterer; mother died of phthisis, otherwise family history good; is a moderate drinker, but not often drunk; has had rheumatism and diphtheria; never had malaria.

Nine days before admission, while working out of doors and perspiring, and subsequently becoming chilled, was seized with chill and rigor, and had pains all through his body. Had another chill six days before admission, with acute pain in his right side, under nipple.

January 8.—On admission, patient has high febrile movement; pulse 105; respiration 32; temperature $103\frac{1}{2}^{\circ}$; surface of body hot and dry; tongue coated yellowish; lips parched, great thirst; marked dulness over right lung, below spine of scapula; broncho-vesicular breathing at upper part; crepitant râles. Ordered ammon. carb., gr. x, quin. sulph., gr. ii, every two hours. Also two pounds of ice in bag to chest.

January 9, 2 A.M.—Temperature 100° ; ice removed. 5 P.M.—Pulse 98; respiration 28; temperature $102\frac{1}{4}^{\circ}$. Ordered ice to chest, and treatment continued. 9 P.M.—Temperature 100° ; ice removed; feels easy and inclined to sleep.

January 10, 10 A.M.—Patient passed a good night, and is feeling comfortable this morning. Temperature 99° ; surface of body warm and moist; bowels confined; but little pain in side; less sputa. Ordered pil. cath. co. No. 3; the same treatment continued, excepting the ice.

January 11.—Patient feels very well. Temperature 99° ; respiration but little accelerated; pulse regular and of good volume. Resolution progressing. From this date patient rapidly improved, and was discharged, cured, on the 18th.

Case II.—D. C., aged 32, Ireland, laborer; general health good, temperate. One week before admission, while selling books on street-cars, was seized with chill and rigor, with pain in left side, compelling him to cry out. He went home and took to his bed.

January 8.—On admission, patient complains of weak-

ness and loss of appetite. Has no pain in side, but little dyspnoea. Pulse 106; respiration 36; temperature 103° . Tongue coated, lips parched, bowels confined, urine scanty and high-colored. Complete dulness over left lung as high as angle of scapula; slight increase of fremitus, bronchial breathing, crepitant and subcrepitant râles. Ordered am. carb., gr. x, quin. sulph., gr. ii, every two hours, and oz. viii of wine, also two bottles of porter. At 5 P.M., temperature 103° ; ice-bag to chest. At 9 P.M., temperature $101\frac{1}{2}^{\circ}$; at 12 M., temperature 100° . Ice removed.

January 9, 10 A.M.—Pulse 80; respiration 24; temperature $99\frac{1}{2}^{\circ}$; feels well; treatment continued, excepting ice. 5 P.M., patient has slight headache; skin hot and dry; temperature 103° . Ordered two pounds of ice in bag to chest. 8 P.M., temperature 102° .

January 10, 1 A.M.—Temperature 100° . Ice having been on eight hours, is now removed. 10 A.M., feels comfortable, except has pain in affected side, which he says is sore and stiff, and interferes with his breathing. Ordered cups iii to chest, over left lower lobe. Temperature normal; treatment continued.

January 11.—Condition is improving, but pain is still considerable. Pleuritic friction heard at point of pain. Temperature 99° . Ordered cups repeated.

January 12.—Patient convalescent.

January 16.—Patient discharged, cured.

Case III.—E. W., aged 39, England, seaman; general health good; had typhoid fever eight months ago. During last twenty years has been a periodical imbibor; was on a spree two weeks previous to present attack.

Five days before admission, was attacked with severe chill and rigor, cough, and pain in left side, under nipple, and behind, over lower lobe. Remained in bed a day and a half, then got up. Had another chill, and pain in side of greater intensity, which compelled him to take to his bed, where he remained until admission, three days afterwards.

On admission, January 8, patient suffers from pain in left side, with hurried superficial respiration. Pulse 120; respiration 44; temperature 105° . Face flushed and hot, tongue dry and coated brown in centre, lips parched, great thirst, surface of body hot and dry, urine high-colored and scanty. Has an anxious expression of countenance. Physical examination shows over left lower lobe, behind, dulness, increased fremitus, bronchial respiration. Crepitant and subcrepitant râles. Exaggerated sounds over upper lobe, and opposite lung. 5 P.M., ordered ammon. carb., gr. x, quin. sulph., gr. ii, every two hours, also sponged down for twenty minutes. Ice-bag applied to chest during the night. Whisky, oz. i, every hour.

January 9, 2 A.M.—Temperature 101° ; ice removed. 10.30 A.M., pulse 108; respiration 36; temperature 104° . Passed a pretty comfortable night; slept several hours. P.M., ice re-applied. 4.30 P.M., temperature 103° ; pulse 104; respiration 40. 9 P.M., temperature 101° ; ice having given out, ordered cold pack. 11 P.M., temperature 100° .

January 10, 10 A.M.—Pulse 108; respiration 30; temperature 101° . Spent a restless night; somewhat delirious; is now easier, and inclined to sleep; no pain, and but little dyspnoea. Ordered stimulating enema, as bowels are confined.

January 11, 10 A.M.—Pulse 92; respiration 32; temperature 101° ; is very weak; had active delirium last night; enema caused two passages. Is now in cold perspiration; sleeping, with loud stertorous breathing and prolonged expiration; breathing interrupted; has subsultus tendinum; hard cough; sputa brown. Treatment continued.

January 12, 10 A.M.—Patient worse; pneumonia extended to right lung, upper lobe, also to left upper lobe. Breathes hurriedly; somewhat cyanosed; is stupid and

restless; subsultus continues, with carphologia. Ordered cups to left side. 4 P.M., pulse 104; respiration 38; temperature 104°.

January 13, A.M.—Typhoid symptoms prominent. Ordered ice to chest, and treatment continued. 12 M., temperature 101°; ice removed. Feels better now.

January 14.—This A.M. patient is delirious and very weak. Pulse feeble and intermittent; eats nothing. Temperature 100½°; pulse 116; respiration 30. 7 P.M., patient died.

Case IV.—R. H., aged 31, Ireland, domestic. General health good. Three days before admission, was seized with chills, irregular, and followed by sweating at night.

On admission, January 9, patient was suffering from great febrile movement; pain in left side at apex of lung; repeated epistaxis from left nostril. Temperature 103½°; pulse 104; respiration 28. No pneumonic sputa; cough slight and dry.

January 10, 9.15 A.M.—Pulse 100; respiration 30; temperature 102¾°. Restless; severe pain in chest; surface hot and dry. Ordered ammon. carb., gr. x, quin. sulph., gr. ii, every two hours. 4 P.M., pulse 108; respiration 40; temperature 104¾°. Ordered ice-bag to chest. 9 P.M., temperature 102°. 11 P.M., temperature 100°. Ice removed.

January 11, A.M.—Pulse 104; respiration 30; temperature 102¾°. Patient feels better. 5 P.M., pulse 108; respiration 36; temperature 104¼°. Ordered ice to chest. 9 P.M., temperature 97¾°. Ice removed; treatment continued.

January 12, 10 A.M.—Patient much better; no pneumonic sputa; pain almost disappeared. Temperature 103¾°. Ordered ice to chest. 2.30 P.M., temperature 101°. Ice removed.

January 13.—Patient feels comfortable. Same treatment continued, ice being applied when temperature above 100°.

January 14.—Temperature normal, and patient gradually improving, and from this date rapidly convalesced.

Case V.—R. E., aged 32, boatman, admitted January 26, 1875. Family history unimportant; has always had good health; drinks, but not habitually. One week before admission, got his feet wet, and was shortly afterwards seized with vomiting and purging; had no pain at any point, no fever until three days after attack. On admission, patient is very feeble, has excessive diarrhoea, yellowish discharge; pulse weak, full, and soft, 100. Respirations accelerated, forty per minute; temperature 103½°. Is slightly delirious, talks incoherently; has considerable cough, but slight expectoration. Tongue coated brown, lips parched, and surface of body hot and dry. In front, has broncho-vesicular breathing; behind, ordinary signs of pneumonia over middle and upper lobes of right side.

Ordered carb. ammon., gr. x, and quin. sulph., gr. ii, every two hours, with extra-diet, and oz. vi whisky per diem. Ice was ordered to chest at 6 P.M. Temperature 104°; pulse 124; respiration 30.

January 26, 2 A.M.—Temperature 100½°. Ice removed; patient states that he feels much better; pulse slower and of better volume, breathes more easily. 10 A.M.—Pulse 116; respiration 28; temperature 101°. Feels comfortable. 4.45 P.M.—Pulse 100; respiration 24; temperature 102½°; condition somewhat better. 6 P.M.—Temperature 103°; ordered ice to right chest. 12 M.—Temperature 100½°; patient comfortable, and dozing. Ice-bag removed.

January 28, 10 A.M.—Pulse 78; respiration 30; temperature 98½°. Slept soundly after removal of ice; bowels very loose, feces still yellow. Patient is rational, and perspiring freely; pulse full, soft, and pretty good volume; tongue dry, and coated brown. Treatment, excepting ice, continued.

January 29, 10 A.M.—Pulse 70; respiration 28; temperature 97½°. Ordered bismuth, gr. xx, pepsin, gr. x, every three hours for three doses. Diarrhoea diminished; patient feeling well; no extension of pneumonic signs.

January 30, 10 A.M.—Pulse 84; respiration 26; temperature 97½°.

February 1, 10 A.M.—Patient feeling pretty well; no dyspnoea or pain at any point in chest; expectorates brownish sputa; pulse moderately strong, and but little accelerated. Physical examination shows subcrepitant râles over affected lobes. Treatment continued.

February 2.—Patient convalescent.

Case VI.—T. W., æt. 31, U.S., bricklayer, was admitted January 30, 1875, and treated precisely as the preceding cases, ice being used when temperature rose above 100°, and on February 4 pneumonia was resolving, and patient convalescent.

Dr. Thomson thought it was very important that physicians should keep reports of all cases they treat, both in hospital and private practice, and concluded by saying that he believed there were many men who had been in practice twenty years, and yet really had less experience than those who have had ten cases and studied them.

Dr. ALFRED L. LOOMIS: "We cannot treat pneumonia or any other disease unless we are familiar with the cause giving rise to its development. In pneumonia we have exciting and predisposing causes, and of all predisposing causes age is the most important. We rarely see this disease in young children; we see it most frequently between the ages of twenty and forty. The pneumonia we see in young children is bronchial pneumonia.

"We find also that climate has much to do as a predisposing cause of pneumonia. Those climates subject to sudden changes are more favorable to the production of pneumonia than those very high or very low.

"Intemperance and whatever interferes with health has very much to do with the development of pneumonia. My impression is that most cases of pneumonia met with are in persons who were not in good health before; hence I question very much that idiopathic pneumonia is frequently met with. If a man is charged with alcohol, for instance, and he places himself in a draught when heated, and gets pneumonia, is it an idiopathic pneumonia? It is alcoholic pneumonia. If a man under a malarial influence, as we all are in this city, exposes himself, and has pneumonia, it is not idiopathic pneumonia, it is malarial pneumonia.

"In regard to blood-letting in pneumonia, there are certain circumstances in which it is beneficial, but it would not be beneficial in a man suffering with malaria. We have two indications in the treatment of this disease: first, find its cause,—not the exciting cause, but the condition of the system preceding it. If the temperature is 104°, it is our duty to reduce it; if it does not rise above 103°, it is better to let it alone. The subject of cold as a means to reduce temperature has been ventilated; my own experience in regard to it, so far as it goes, is rather unfavorable. You can lower the temperature a degree or two by full doses of quinine, and I usually begin by giving gr. x, when the temperature is 105°. The second object in the treatment of pneumonia is to sustain the heart. So far as my experience goes, patients die from failure of the heart. As an agent to overcome heart-failure, alcohol is the remedy."

EXCISION OF THE BLADDER (*The Lancet*, January 9, 1875).—Dr. George Thomson reports a case of excision of the bladder occurring in a woman æt. 40, and following a fit of tenesmus brought on by acute cystitis. He believes the case to be unique.

REVIEWS AND BOOK NOTICES.

REPORT ON THE PROGRESS OF OTOLGY. By C. H. BURNETT and CLARENCE J. BLAKE, M.D. Boston, 1874.

We do not, as a rule, notice pamphlets, but this very handsome pamphlet of seventy-three pages is seemingly so thorough and complete that we call the attention of all interested in otology to it, as a whole library in a paper cover.

PHARMACOGRAPHIA. A HISTORY OF THE PRINCIPAL DRUGS OF VEGETABLE ORIGIN MET WITH IN GREAT BRITAIN AND BRITISH INDIA. By FRED. A. FLÜCKIGER, Professor in the University of Strasburg, and DANIEL HANBURY, F.R.S. London, Macmillan & Co.

This handsome volume of nearly seven hundred pages is a work upon materia medica proper, avoiding altogether pharmacy and therapeutics, and not diving too deeply into the chemistry of the subject. Its exact scope may be gathered from the following sentence, which we extract from the preface: "It is, in fact, a record of personal researches on the principal drugs derived from the vegetable kingdom, together with such results of an important character as have been obtained by the numerous workers on materia medica in Europe and America." The book is undoubtedly one of permanent value, containing an immense amount of facts, most of which have been verified by the personal knowledge of the authors. There are described in it a number of drugs, such as the Indian Ipecacuanha, which are never seen in this country, and some of which, we believe, have not found their way even into the United States Dispensatory. The descriptions of the various recent efforts at the cultivation of drugs, in England, in Europe, and in the Tropics, are exceedingly interesting. Altogether, the book will for many years be of great value to all interested in materia medica.

GLEANINGS FROM OUR EXCHANGES.

TEST OF DEATH.—Dr. Angelo Monteverdi states, as the result of a great number of experiments, that the subcutaneous injection of liquid ammonia produces invariably a vinous red spot, with very sensible projection of the hair-bulbs, while in real death these are as invariably absent.—*Arch. di Med., Chir. ed Igiene.*

REMARKABLE CASE OF FASTING (*Peninsular Journal of Medicine*, January, 1875).—Dr. A. A. Whitney reports a case of persistent fasting occurring in a man æt. 75, who for seven weeks took only about two ounces of solid food and a similar amount of liquid nourishment. There were periods of from ten to eighteen days when absolutely nothing but water and ice was taken.

He was suffering from religious melancholia, and made three unsuccessful attempts at suicide, but finally died from exhaustion produced by his voluntary starvation.

INFLAMMABLE GAS FOUND IN THE STOMACH (*Irish Hospital Gazette*, January 1, 1875).—Dr. Heynsius relates the case of a man who suffered violent eructations after eating, and on four occasions the gas which was discharged had caught fire, burning his lips and nose severely. He had symptoms of acid dyspepsia, with dilatation of the stomach, probably the result of a stricture of the pylorus. The vomited matter was examined, and the gas which it generated was found to consist chiefly of hydrogen and carbonic acid. In the distillate butyric acid was found, and the phenomenon was probably due to butyric acid fermentation, the hydrogen being the cause of the inflammability of the ejected gas.

FATTY DEGENERATION OF THE HEART IN ADVANCED LIFE (*The Lancet*, January 9, 1875).—Dr. L. H. Jayne believes feeble, irregular, or intermittent pulse, dyspeptic symptoms, epigastric pain, frequent vomiting, more especially after taking food, and diarrhoea, to be diagnostic of fatty degeneration of the heart in old people.

NOTES AND QUERIES.

1729 CHESTNUT STREET, February 13, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Early in March the buildings long known as the "Philadelphia School of Anatomy" will be destroyed for the new post-office. In response to a number of requests, I am endeavoring to gather the facts of its history for a concluding lecture. Many of the lecturers who have given courses in the two buildings are either personally unknown to me, or I may be ignorant even of the fact that they ever have lectured there at all. May I, therefore, take this method to ask them, through you, for all the information they can give me at once, either as to their own lectures or those of others, or in general any facts referring to its history? I want not only to be thus as accurate as I can, but also to obtain many facts which must otherwise be lost. I would like to know not only the lecturers who have been connected with it, but also what work they did, whether literary, experimental, physiological, etc., while connected with it, for all this is a part of its history. Personal reminiscences, anecdotes, etc., I would be glad also to gather.

The lecture will be delivered in the Philadelphia School of Anatomy at 8 o'clock P.M., March 1, 1875, and I extend to the profession, and especially to those who have ever taught within its walls, a cordial invitation to be present.

Very truly, yours,

W. W. KEEN, M.D.

WE have received a note from Dr. W. W. King, stating that in his letter to Mr. Fairthorne, published some weeks since in the *Philadelphia Medical Times*, it was inadvertently omitted that he employed chloral as an antiseptic as early as the latter part of 1871,—so far as his knowledge goes a year or more before the subject was noticed in the medical journals.

PROF. HARVEY L. BYRD, of Baltimore, has written us a letter containing a published card in regard to the resignation of Dr. W. W. Murray and himself from the College of Physicians and Surgeons of that city. The card is so long that we can hardly spare the space for it here. Our Baltimore correspondent supposed that the disagreement of the faculty was concerning the filling of certain chairs; but from the card it appears that the trouble grew out of this election indirectly. Dr. Murray says, "I resigned my professorship not because of the election or non-election of any one, but because I believe that I have, under cover of law, been deprived of a constitutional right or prerogative of which the Faculty had no moral right to deprive me."

WEVILL FUND.

Dr. Thomas G. Morton	\$20.00
" R. J. Levis	20.00
" H. Yale Smith	10.00
" J. J. Kirkbride	5.00

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held at the hall of the College of Physicians, Wednesday, February 24, at 8 o'clock P.M.

Dr. James H. Hutchinson will read a paper on "The Use of the Ophthalmoscope as an Aid in the Diagnosis of Cerebral Disease."

The medical profession in the city are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 9, 1875, TO FEBRUARY 15, 1875, INCLUSIVE.

ROSE, GEORGE S., ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 24, A. G. O., February 8, 1875.

SATURDAY, FEBRUARY 27, 1875.

ORIGINAL COMMUNICATIONS.

A FURTHER CRITICISM ON THE SO-CALLED CASE OF INFECTION BY SYPHILITIC SEMEN,

WITH REMARKS UPON THE TRANSMISSION OF SYPHILIS IN COITUS BY MEANS OF THE BLOOD, AND ITS BEARING UPON MARITAL RELATIONS.

BY R. W. TAYLOR, M.D.,

Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases; Physician to Charity Hospital, New York.

IN the *Philadelphia Medical Times*, issue of February 6, 1875, I find a criticism, by my friend Dr. F. R. Sturgis, on a case reported by Dr. Isaac Smith, Jr., of Fall River, and published in the November number, 1874, of the *New York Medical Journal*. At the time of publication I read this case, and intended to criticise it in my forthcoming report on syphilis for the *Archives of Dermatology*; but, as Dr. Sturgis has brought it to the notice of the readers of this journal, I think that my remarks upon the case and my opinions of his criticism should be published in the same periodical. Thus far for preliminaries; now let us examine the case or premises. Briefly but correctly stated, this case is, as far as given by Dr. Smith, as follows:

A man has a chancre in February, 1872, which, existing eight weeks and then healing, leaves a cicatrix. Very soon he has secondary manifestations, showing that he is syphilitic. In a year he marries, and about six months after, his wife having prolapsus uteri, he notices a sore upon the os, which Dr. Smith considered a chancre. The history of the husband from the date of marriage to the discovery of the infection of his wife is not given, nor have we any circumstances relating to his coitus with her, nor of the peculiar conformation of his penis. In due time, secondary lesions show that the wife also is syphilitic. Virtually, the case ends here; but we have the further information from Dr. Smith, that in January the husband noticed another lesion on his penis, and upon this and the reporter's remarks or conclusions thereon, Dr. Sturgis makes some further criticisms. So that I shall have to consider in my review of this matter, first, the theory of syphilitic infection as advanced by Smith, and the criticism made by Sturgis; and, secondly, the views of both Smith and Sturgis as to the nature of the lesion on the penis which occurred in January, 1874. The latter consideration will be embraced in a subsequent paper.

As regards the woman's case, the question arises, What was the source of contagion, assuming, as we have every reason for doing, that she was virtuous, and that she contracted the disease from her husband? Owing, undoubtedly, to the fact that the husband did not present any lesions upon the penis, Dr. Smith thinks that the contagion was communicated through the semen; consequently, that it controverts, in one particular, the view or law that the physiological secretions of syphilitic persons are

not capable of transmitting the disease. I shall not discuss here this question, but shall merely consider the bearing of the case upon it. As there was a chancre upon the uterus, it is absolutely certain that the point of entry of the syphilitic virus was in that organ, and that the active agent was the penis of the male. What, then, was the contaminating secretion? There is considerable evidence against the view that the semen was the cause; seeing that syphilitic men having no lesions upon their penis cohabit very frequently with females who do not become syphilitic. If we admit that the semen may convey syphilis, how can we explain the great number of cases in which women cohabit with syphilitic men with impunity? I have myself known of very many instances of this kind, but have not heard of syphilis having been communicated when no lesion or fissure existed on the male organ; indeed, if such a mode of contagion is possible, the number of women who would become syphilitic annually would be appalling. I purposely leave out of consideration at this time the question as to what effect the semen of a syphilitic man has upon the child and upon the health of the mother during the parturient period and afterwards. The fact that such multitudes of women escape points significantly to, and, I think, warrants, the conclusion that *the semen of a syphilitic man does not develop in the female the initial lesion of syphilis to be followed by general systemic infection*. Still, if we cannot reasonably explain that contagion in this case occurred through other secretions, we shall have to admit, though of course we do not believe it, that there is a probability of such contagion having taken place through the semen. I think that a very plausible and simple mode can be cited, and one which is borne out by well-established facts and by indubitable precedents. My friend Sturgis thinks—and I will first consider his views—that the infection took place through the secretions of urethral mucous patches, and so certain is he of this that he says, "Until the existence of this lesion in the canal, or upon the membrum virile, or upon any other part of the body capable of affording a means of contagion, be excluded, we are forced to render a verdict of *non-proven*." Again he says, "Are urethral mucous patches so extremely rare as to be entirely excluded as a probable means of contagion?" and, further, "Which in the present state of our knowledge is considered most unusual: the existence of mucous patches in the urethra, or direct infection by semen?" This explanation brings up some very important considerations,—namely, the question of the occurrence of mucous patches in the urethra, and of their greater or less rarity of occurrence. Certain it is that as their secretion is equally as contagious as that of the initial lesion of syphilis, had they existed in this case the contagion would have been, under the circumstances, inevitable. Some time ago my attention was prominently drawn to the lesions produced by syphilis in the urethral canal, and from the opinions which I gained by my study and observations of numerous cases I am now very much surprised at what is said by Sturgis

as to the existence of mucous patches in the urethra. As that canal is lined with a mucous membrane, it is of course liable to be the seat of the development of these lesions; yet it seems to escape in very many instances. It seems to enjoy an immunity similar to that of the conjunctiva. In a vast number of cases in public and private practice I have never been able to find this lesion, and several friends who see a large number of cases of syphilis have a like experience. I have sought for its description in various text-books and monographs, and yet it is not noted. Thus, Bassereau, in his classical treatise (*"Traité des Affections de la Peau symptomatiques de la Syphilis,"* page 318, Paris, 1852), gives a table of one hundred and thirty cases of mucous patches observed by him, and only one was at the meatus urinarius, while upon the prepuce and glans there were twenty-eight. I have seen an instance in which there was a mucous patch at the meatus, and one just inside the right nares. Other authorities are equally silent, and in the details of syphilitic cases in various works, monographs, and theses, though not treating of this subject, I have looked in vain for the statement that there were mucous patches in the urethra. I am somewhat surprised at this fact, seeing that the urethral mucous membrane, like any other, may be involved, in rare instances, by syphilis. Thus, in some rare cases, during the early secondary period patients express their surprise that they have what they call "clap." This occurs generally during or just at the evolution of the secondary lesions, and often at the time when the initial lesion is still active. Upon inspection, more or less tumefaction of the lips of the meatus is found, and a purulent discharge, sometimes quite copious, escapes. The symptoms are in some instances severe; in fact, the whole aspect of the case indicates urethritis. In some of these cases there has not been any anterior blennorrhagia, and in all of those I refer to there had been no recent coitus, all such having been rigidly excluded in which this act had been performed within a fortnight. The interesting point to be determined in these cases was, what was the nature and cause of the discharge? My studies have proved to me that a hyperæmia similar to that which invades the pharynx in early syphilis takes place, and that, owing to the conformation of the parts, the inflammatory process runs higher. In some instances, this hyperæmia begins spontaneously; in others, I have thought that previous attacks of blennorrhagia have, perhaps remotely, predisposed to it. According to my observation, this syphilitic urethritis, if we may so call it, is confined in point of time, as I have said, to the early part of the exanthematous period, sometimes being developed just before the time of the healing of the initial lesion. This condition is, singularly enough, passed over without description by authors generally, yet its existence is beyond doubt. My friend Dr. J. N. Hyde, of Chicago, is one of the few who have called attention to it, in a valuable paper upon syphilitic contagion, published in the *American Journal of the Medical Sciences* for January, 1874.

I have noted cases in which all sources of contagion were carefully eliminated, and in which this feature was observed. My interest in its study led me to examine three of my cases at various periods with the endoscope, and all that I saw was a swollen hyperæmic mucous membrane, secreting pus in great quantities, not differing in any particular from simple blennorrhagia. The inflammation extended to the proximal end of the fossa navicularis and slightly beyond; but there were no localized spots more inflamed than the rest; no evidence of any lesion like the mucous patch. Indeed, in one case I suspected the presence of the lesion, yet I did not find it, and my endoscopic examinations were very satisfactory. I am thus particular in describing at some length this affection, in consequence of the stand which I have taken as to the occurrence of mucous patches in the urethra. Besides this, I wish, in case of argument, to eliminate thoroughly and differentiate beforehand this condition, which might be quoted as being due to the presence of these mucous lesions, whereas I think that the facts which I give will prove fully that it does not depend upon them as a cause.

Now, then, though I am not prepared to deny that mucous patches may be developed in the urethra, I will state most positively that the probabilities of the occurrence of such an accident are among the most remote of any of the lesions of syphilis.* Indeed, as a clinical rarity it is one of the rarest; of course I mean well-defined typical mucous patches. Now, it is very certain that Dr. Smith's patient did not have the form of urethral syphilitic trouble which I have detailed, nor have we any evidence that there was the slightest abnormality of his canal. If he had had urethral mucous patches, I think that the sensations which they would have produced, and the secretion which would have escaped, which, however, might be so

* I am led to think from careful and extended study and reading that no author has really seen mucous patches in the male urethra, or has convinced himself conclusively that such have existed in any case. Unfortunately, there is such a want of precision of statement of several that their meaning can only be arrived at by inference, and by studying the data upon which they have based their assertions. I will endeavor to show the state of the question. Virchow (*Wüzburgur Verhandlungen*, vol. iii. 366) speaks of a case of ulceration of the membranous and prostatic parts of the urethra, involving also the bladder, which, he thinks, was of syphilitic origin. He also says that syphilitic ulcerations and cicatrices of the canal of the urethra are very common, and are similar to those of the larynx. Further, he adds that he has seen these lesions in the female urethra. Lancereaux (*Traité historique et pratique de la Syphilis*, Paris, 1873), in referring to this statement of Virchow, says that he can neither confirm nor invalidate it. Then we find that Rollet says (*Traité des Maladies vénériennes*, Paris, 1865), in speaking of the site of development of mucous patches, and referring to the urethra, "An observer has found examples of them even at a very great depth; I have never seen such." Again, we read in Bumstead's excellent work, "Mucous patches upon the genital organs in both sexes sometimes give rise to a discharge resembling gonorrhœa, from the neighboring mucous membrane," etc. It will be seen that the only really definite statements are those of Rollet and Lancereaux, who have not seen these lesions in this site. The reference of the former is, without doubt, to Virchow, whose case is so doubtful in all its particulars, both as to what the lesion really was, and whether it was truly of syphilitic origin, that it is not worthy of any consideration. It is evident that Virchow has assumed the occurrence of syphilitic lesions in the male urethra from the fact that he has seen such in that of the female. The statement made by Bumstead evidently refers to lesions outside of the canal, involving in the male either the prepuce or glans or both, and in the female the orifice of the urethra, for he says distinctly, "Mucous patches upon the genital organs," etc. Certainly, although the analogue in function, the female urethra, owing to its opening into the vulva, which is so prone to the development of mucous patches, cannot be classed with the male urethra as being equally susceptible to these lesions. So that, all things being considered, it will be seen that there is no positive statement that mucous patches have been found by any one in the male urethra, but there are such assertions that they have not been discovered there. The existence of a discharge does not prove that these lesions necessarily give rise to it.

slight as only to glue the lips together, would have caused him to fly to his physician, for he knew of his syphilitic condition, and showed a solicitude about himself by consulting Dr. Smith at each manifestation of mischief. Then, again, we have no evidence in this case that the mucous membranes were involved. It is fair to assume that if the patient had experienced any abnormal sensations in his mouth and throat he would have called the physician's attention to them, and that the latter certainly would not have failed to mention them among the other lesions which he speaks of. Thus, as he, perhaps, has no lesion of one mucous membrane, it is fair to think that the others escape. For, although not absolutely the rule, we very frequently see the mucous membranes of various parts involved at one time, showing a tendency in them generally to syphilitic action. Thus, in clinical practice, how often do we find buccal mucous patches co-exist with similar lesions about the genitals! While, therefore, we cannot lay this coincidence down as a law, yet it is of frequent occurrence. I should add further that it can much more frequently be noticed that buccal mucous patches exist alone while other mucous membranes escape, than that the latter are involved while the mouth escapes. Thus, in by far the greater number of cases, if mucous patches exist upon the genitalia, it will be found that the mouth also has been attacked. Other observers have undoubtedly noticed these peculiarities of distribution. The practical deduction of these points is this, that it is very probable that had mucous patches existed in this man's urethra, that mucous membrane would not have been the only one involved, and that the mouth would almost certainly have been attacked.

Now, then, in fairness to Dr. Sturgis, I must state his reasons why he accounts for the contagion by the presence of mucous patches in the urethra. To quote his words: "But perhaps it may be asked, Why suspect the presence of mucous patches? For three reasons: first, because they are the most common lesion of the earlier manifestations in syphilis; second, because they are often overlooked or misunderstood when seated upon the mucous membrane of the penis, or in the urethra; and, third, because it is more than probable that the man had one within six months after infecting his wife." We certainly grant that, owing to their frequency of relapse, mucous patches are more often met with than lesions of the skin. Still, we must add that there are certain membranes which, by the experience of all observers, are shown to be more liable than others both to this development and relapse, and that there are other membranes which are rarely if ever attacked. The urethral mucous membrane belongs to the latter class: therefore I think I need not refute this statement any further. But I must consider the third reason given by Sturgis, who thinks that the lesion on the penis of the husband which showed itself six months after the wife's infection was a mucous patch, consequently that he might have had a similar lesion inside of the canal just at the time when he infected his wife. I am prepared to admit that perhaps this lesion was a mu-

cous patch, as we sometimes, though very seldom, see them *there*, namely, at the lips of the meatus; yet I do not think that the inference is warranted. I have, I think, shown that there was no reason for suspecting any intra-urethral lesion, as the symptoms of it are not given at all.

And again, we have no evidence proving that any mucous membrane of the body was involved. From all of these considerations I am forced to the conclusion that the chancre on the uterus of this woman was not produced by the secretion of mucous patches hidden in the urethra of her husband. The fact that the organ involved was the uterus, and that the husband did not have buccal lesions, is sufficiently convincing that contagion by bestial practices did not occur.

As the question involved in this case is so interesting to science and so vitally important to hygiene, I think I need offer no apology for my somewhat extended review of it.

The view that the contagion was not by means of urethral mucous patches being then considered unproven, what is the most probable source? As the urine is known to be perfectly innocuous, the only other fluid is the blood. Was this contagion effected through the blood? I certainly need not at this late day argue the question of the contagiousness of this fluid. The experiments of Pellizari and numerous clinical cases have demonstrated this, so that now it is an admitted fact. Let me quote from the veteran syphilographer Waller, of Prague, who did so much in establishing the fact of the contagiousness of the secondary lesions of syphilis and of the blood in face of the witticisms and biting sarcasms of Ricord, who then denied such a possibility, though he was afterwards convinced of his error by the experiments of his own pupils. Waller details the case (*Prager Vierteljahrsschrift*, vol. xxix., 1851) of "a man who became syphilitic in December, 1848. He had angina and syphilitic iritis, and seemed to be entirely cured at the end of the following June. Towards the close of the year 1849, he married a perfectly healthy girl. In the honeymoon the coitus was guardedly indulged in, by reason of the pain it produced in the woman, who had previously never had any intercourse with men. At the end of December both man and wife had a slight flow of blood during the act, and in January, 1850, the woman noticed a macular and squamous syphilide over the whole body, and a little later, condylomata appeared on the pudenda. The man neither then nor thereafter showed any evidence of the disease." I have no doubt that this case suggested to Pellizari the idea of the experimental inoculations which he so successfully made.

Within the last few years, Maurice, in his interesting work ("Mémoire sur les Affections syphilitiques du Système osseux," Paris, 1872), incidentally reported a suggestive and conclusive case which is well worthy of being reproduced here in brief. During the siege of Paris, towards the end of the year 1870, a man, whose wife had for safety been sent into the country, contracted a syphilitic chancre, which was duly followed by general manifestations. Under treatment, all traces of the disease had disappeared at the time

of the return of his wife, which was near the end of February. Maurice states that he warned him beforehand of the various dangers of contagion, especially of that of the blood. Three days after the wife's return, the husband went to Maurice in great alarm, and told him that in sexual intercourse he had become chafed, and that blood had escaped. Upon examination of his wife, three weeks later, a chancre was found at the orifice of the vagina, and in due time she presented evidences of syphilis.

Here, then, are examples of an occurrence which I do not think is rare. There are points of resemblance between them and Dr. Smith's case, though in the latter the flow of blood is not mentioned. This, however, may be readily explained. Since the semen is powerless in conveying syphilis, is it not in perfect accordance with the laws of syphilitic contagion and of well-established precedents to suppose that infection occurred in Smith's case through the blood? The circumstances are favorable to that view. The husband is undoubtedly syphilitic. His wife's uterus is in a morbid condition, and falls downwards. Then, again, though very susceptible to the transudation of fluids in the normal state,—owing to its great vascularity and to the superficial position of its capillaries,—is not a uterus which is inflamed and perhaps eroded of its mucous membrane still more susceptible? Certainly there could be no soil more permeable to the syphilitic virus. As I have said, there is no description of the penis of the husband, and this is very essential to the establishment of proof. Thus, there are some organs which, owing to their conformation, are more liable to be torn and to give issue to blood than others are. Thus, when the prepuce is long and tight, particularly when there is a fibroid ring at its end, also when the frænum is short, in these conditions very often fissures of greater or less extent occur, which may give issue to blood.

Then, again, cicatrices of chancres are frequently torn in the sexual act, and sometimes they are the seat of copious bleeding. In this man's case there was a cicatrix. These cicatrices sometimes, indeed very often, become eroded or denuded of their epithelium, and then they give rise to bleeding or oozing. In addition to this, let it be considered what a highly vascular and delicate membrane is that of the prepuce with its numerous folds. Besides chafes and fissures occurring when the prepuce is somewhat abnormal, how often do we find these same lesions of continuity in those which are not abnormal! Again, owing to obvious causes, newly-married couples are peculiarly liable to these little affections. Every practitioner who sees large numbers of cases of venereal disease will certainly say that lesions such as chafes and fissures which are capable of giving issue to blood are of very frequent occurrence. Indeed, the very frequency of occurrence has often called to my mind, in cases under inspection, the great risk women would have run had the patients been syphilitic. Now, between man and wife, such an occurrence will not usually lead to any thought or anxiety on the part of the husband, and he passes it over as trifling, whereas, if the same accident occurred in coitus with a person

at all liable to suspicion, he would certainly be very anxious as to the result. Now, it might be urged that we have no evidence upon which to suspect that blood was caused to flow in coitus between these parties. This is very true; but let it be considered how little attention would be paid to the fact if it occurred, and how readily and how often it would escape unnoticed, and how favorable all circumstances are to its being overlooked. Besides this, a fissure might have occurred, and yet have passed unnoticed, owing to the careless habits of the man. Now, we know, or it is fair to think so, from the statement of Dr. Smith, that he did not warn his patient, as indeed every practitioner is in duty bound both by moral and scientific reasons to do, that there was great danger, he being in the secondary period, of his communicating syphilis by the blood in the sexual act: consequently this man was ignorant of the peril involved. Not having been forewarned, such an occurrence as the slight tearing or abrasion of any part of the penis would not cause in his mind any alarm, and the fact, seeming unimportant at the time, would soon be forgotten, certainly would not be brought to the attention of the physician. On the contrary, even in a married man who has not been otherwise exposed, what are his feelings at experiencing the slightest uneasiness in the urethral canal, and at the sight of a discharge, even if it is so scant that it merely glues up the lips of the meatus? Certainly, in such a state, he would speak of his trouble quickly. Now, I think that these considerations render it highly probable that an abrasion or fissure might have occurred, and that from it or them blood escaped which caused the contagion. This probability is much stronger than that urethral mucous patches existed, as the former is in direct accordance with science, while the latter would be one of the very rarest of all exceptions.

Besides this, the circumstantial evidence offered by the case is, I think, more in favor of the escape of blood than of the occurrence of mucous lesions. Certainly the explanation by the blood-hypothesis does not require and has not received any straining at argument or perversion of known facts, whereas when we say that it was by semen we endeavor to controvert by one imperfectly-reported case a well-grounded belief or law, and a number of cases better known; while, if we accept Dr. Sturgis's theory, we must admit the existence of lesions which have never yet been seen, and which we are warranted by facts in thinking perhaps never will be seen. Besides this objection, it must be added that the evidence in the case does not offer the slightest pretext for thinking that there was any lesion of the urethral canal at the time of contagion and immediately after it.

It has often appeared to me very surprising that while the fact of the contagious nature of syphilitic blood is so generally known, or rather stated in books, the practical application of it as suggested in this argument seems to be very extensively overlooked, or rather not clearly appreciated. Thus, the text-books, while they state that the blood is contagious, do not bring out the bearing of the fact as fully as they should, and, owing perhaps to the want of illustrative cases, it is never submitted to careful examina-

tion and elaboration in clinical lectures. Therefore students go into practice virtually ignorant of this vitally essential point, while the practitioner, not having his attention drawn especially to it, fails to make practical use of it. Plainly stated, the case is this: that while physicians are aware of the contagious character of mucous patches, and upon occasions warn their patients of the fact, they in the great majority of cases fail to inform them of the similar nature of their blood, and of the danger of infection by it. Now, it is equally important that the latter fact should be explained as the former, and, indeed, I may say it is more important, for this reason, that the blood retains its contagious properties for long periods, indeed for indeterminate periods, consequently the liability to contagion extends for a similar time, while, although mucous patches are by their secretion so contagious, and are so apt to relapse frequently, yet they can be cured, and then they cease to be a source of danger. To apply this fact practically, supposing, as is most probably the case, that a man's blood is contagious during the whole secondary period, which in the average we state to be two years; now, during that whole time, if by chance that fluid is placed in proper conditions, contagion ensues; while, even if a patient has the most inveterate attacks of mucous patches, they certainly are present, and therefore contagious,—but let us say for one-half of that time, at the most. I have been struck by the want of attention paid, and, I may say, by the ignorance displayed, by very many, as to this contagious nature of the blood, and *I have seen numerous undoubted instances in which newly-married women have become syphilitic through this means, in consequence of the physician not having warned the syphilitic husband prior to marriage.* In several instances I have learned that they were informed of the probabilities of occurrence, and of the dangers of mucous patches, and assured that they were the only troubles to be feared. So strongly has this fact been impressed upon my mind that I in every instance, when it is necessary, warn patients very solemnly of the dangers of chafes and fissures about the penis. It is obvious that to the newly-married this warning is very necessary, and, indeed, I think it the duty of the physician to instruct men and women quite freely even of this fact. I am assured in my mind that, when the people generally understand this danger, much domestic unhappiness will be avoided, many innocent persons will escape syphilitic contagion, and there will be markedly fewer cases of infantile syphilis.

As regards the domestic relations, the occurrence of syphilis by this means is often the cause of suspicion and unhappiness. Thus, a man who, having been syphilitic, and being as he thinks cured, even knowing that mucous patches are contagious, by sad chance infects his wife. If at the time he has a fissure or chafe, it is healed and forgotten in a short time, if, indeed, thought of at the time; very soon his wife develops the initial lesion of syphilis, and he, not having, as he thinks, any syphilis about him,—as they say,—wonders how his wife became syphilitic, and it may be that very serious trouble

results. I will quote an illustrative case farther on. Suppose this man tells his story, and asks the advice of a physician who does not appreciate this point, what is the result? Indeed, I think I need not multiply examples; it is sufficient that this fact exists, and it is the solemn duty of the physician—who has so many problems to solve daily, involving oftentimes tender interests and the integrity of families—to know it thoroughly, and not only to know it, but to make practical use of it. So vitally important is this matter, that I think I shall not be accused of egotism if I detail my line of advice to syphilitics about to marry. Certainly, if it were arrogant on my part, if my counsel saved one person this serious disease, I think it would be acceptable. Now, then, when advising men, of course I insist as far as possible upon the lapse of at least two years from contagion, and even longer if the manifestations of syphilis show an unusually active state of the disease. At the end of this time, in seemingly auspicious cases, I inform them—if they have been treated regularly and for a sufficient time—that they are as well as they could be, perhaps even are cured, but that there are certain precautions to be observed and dangers to be avoided. I then carefully explain, or reiterate, as I have undoubtedly spoken of the matter before if they have been long under my care, the nature and danger of mucous patches and of ulcerative lesions generally; then I go minutely into the liabilities of contagion by the blood. I make this point very clear by warning them of the danger of chafes and fissures, and of the necessity of a temperate course. I then examine the penis, to see whether, owing to its conformation, it is liable to any lesion of continuity in coitus. If the frænum is short, and tends to curve the penis downwards in erection, and consequently is very liable to be torn by violent use, I recommend that it be properly treated by operation. If the prepuce is in such a condition that fissures or chafes are liable to be developed in it, I also suggest the danger and advise the remedy. When I have done this, I have done all that I can; and I have no doubt but that I have saved many persons from syphilitic contagion. These remarks may suggest to some the propriety of use, under these circumstances, of the appliances called *safes*; yet I think that they are so uncertain and so open to serious objection that their use should be discarded. Thus far I have alluded only to the fact of contagion from male to female; now, though the limits and scope of my paper do not admit of it, I must call attention to a point made by my friend Dr. Hyde, who suggests that menstrual blood of syphilitic women may possibly be the means of the transmission of the disease. I need not dwell upon the practical import of this suggestion. I think that I have now said enough to prove that this somewhat overlooked and unappreciated source of contagion is well worthy of the prominence which I have here attached to it.

At the risk even of being considered prolix, I think it is well to call attention to a case published in the *Philadelphia Medical Times* for February 7, 1874: it is contained in an article entitled "On the Communicability of Syphilis after it has been

Apparently Cured." The author, Dr. H. E. Woodbury, reports the case of a man forty years of age, who, in the spring of 1870, became syphilitic. Under treatment he was said to be cured, and, with the consent of the physician, was married in 1872, at which time he was apparently well. His freedom from syphilis was more apparent than real, for he was attacked by a syphilitic ulcer six months later.

Two months after his marriage, he called Dr. W.'s attention to a painful sore on his wife's genitals, and "very suspicious symptoms." No further history of the wife is given: it however may be judged from the context, that the doctor regarded or suspected the case to be syphilitic. The woman declared that she was chaste, and the husband, asseverating his continence, under examination shortly afterwards was found to be free from lesions about the penis. The doubt in the attendant's mind was as to how the sore originated; and three consultants were unable to assist him to a rational conclusion. In his remarks upon the case, Dr. Woodbury says, "We can only add that in this case *some deception must have been practised or some mistake made*, as we verily believe." The italics are by Dr. W.

Now, then, here is a case in which in the newly-married wife of an undoubtedly syphilitic man an ulcer of the genitals is developed. The physician, failing to recall to mind the probability of the contagious nature of the husband's blood, and of the liability to infection of the wife in coitus, and not having the point suggested to him by the three gentlemen who saw the case in consultation with him, is in doubt as to the origin of the ulcer upon the genitals, and finally concludes that some deception was practised. In other words, the character of, as there is no reason for thinking otherwise, a pure and worthy woman is called into question under circumstances of which she is the innocent victim. I need not suggest how clearly and conclusively the doubt in this case could have been dissipated had this undoubted mode of contagion been borne in mind by the physician, and had the probable circumstances of the infection been suggested and explained to the husband and wife.

The bearing of this case is so forcible that I think it will do more to sustain my position than any argument, however forcible, would. When this source of infection comes to be generally recognized, we shall cease to read of these doubtful cases, and much misery of families will be averted.

125 EAST TWELFTH STREET, NEW YORK, Feb. 16, 1875.

DIPHTHERIA: A NEW TREATMENT.

BY H. V. SWERINGEN, M.D.,

Fort Wayne, Indiana.

I HAVE had some experience in the treatment of this disease during an epidemic which visited the city of Fort Wayne, Indiana, the present winter (1874-5); and, notwithstanding the fact that what success I had occurred in the latter period of the epidemic, which in all epidemics is usually considered the mildest portion, yet I cannot avoid attributing that success in a great measure to the change

I adopted in my treatment; and I believe that I am warranted in so doing by the facts that the disease was yet at this time quite generally fatal, and that out of a number of severe and well-marked cases I was so fortunate as not to lose a single one under my new treatment. I call it *my* treatment because I have never heard its theory suggested, nor have I seen it in print. I have not yet had an opportunity of testing its value in the *severest* or *most malignant* cases, such as occurred in the earlier part of the epidemic, but I feel confident that in a large proportion even of these, if adopted *early*, it will prove successful. The discovery which I have been flattering myself as having made—and it remains for future experience to establish its value—is, that *prompt cinchonism, followed by an alterative tonic, is, if not absolutely a specific, the most proper and successful treatment for diphtheria.*

It may be said, however, that quinine as a remedy in diphtheria is not new; that it is almost invariably given in the course of the disease. This is true; but it is equally true that it has never been given with any specific object in view, other than its tonic or antiperiodic effect. It has usually, in fact, in this disease, been given on the "hit or miss" principle. The remedies commonly considered of the most value in the treatment of diphtheria are the muriated tincture of iron, chlorate of potassium, carbolic acid, and nitrate of silver; the former three given both constitutionally and locally, the latter applied locally only. All the text-books which I have consulted seem to rely chiefly upon the above-named remedies.

It is the *condition* known as *cinchonism* which is produced by the administration of quinine in *positive* doses until its peculiar physiological effects are induced to a *marked degree*, that I contend is the *first grand object to be accomplished in the treatment of diphtheria.* This statement is based upon the confidence I have in the antiseptic properties of quinine *if properly administered*, and the belief that when the condition of cinchonism is fully established, the septic poison in the circulation is then neutralized; and this belief is founded on the *fact* that in every case that I have thus treated, just so soon as that condition was established, the exudation became detached without any local interference whatever; none during the whole course of treatment. Another important *fact* in this connection is, that the most severe and malignant cases I had were those in which it was most difficult to establish the condition of cinchonism. A little boy six years of age, son of C. L. Thomas, Esq., residing at No. 134 Jackson Street, Fort Wayne, Indiana, took sixty-four grains in forty-eight hours before he complained of "ringing in his ears or deafness;" but when this took place the membranes became detached of their own accord, his appetite in a measure returned, the swelling of the submaxillary glands began to subside, and in a comparatively short time he made a good recovery. In this case I did not make a single local application. In fact, I have abandoned local treatment altogether except in cases where it is absolutely necessary to remove excessive mechanical obstruction of the air-

passages, or where it is necessary to correct the fetor by disinfectants. I had six other cases under treatment about the same time, all of whom were well marked, and the line of treatment pursued in each was as follows:

R Quin. sulph., gr. xxxii;
Acid. tannic., gr. x;
Syr. simp., f℥i;
Tr. ol. menth. pip., gtt. iii.—M.

Ft. mist.

Sig.—A teaspoonful every three hours until cinchonism is induced.

After which I administered the following:

R Potassii iodidi, gr. xxxii;
Potassii bromidi, ℥ii;
Syr. simp.,
Tr. cinch. co., āā f℥i.—M.

Ft. sol.

Sig.—A teaspoonful every three or four hours.

The above may be given alternately with the following:

R Tr. ferri chlor., f℥ii;
Syr. simp., f℥vi.—M.

Ft. mist.

Alum or ipecac as emetics are useful when the exudation shows a disposition to extend to the larynx, or when there is much difficulty of breathing from tumefaction of the fauces, or from accumulation of the pseudo-membranous deposits. Food,—milk, beef-tea, and stimulants,—brandy, wine, etc., constitute a very important part of the treatment.

If the principles involved in the foregoing considerations of the treatment of diphtheria be correct, may we not reasonably conclude that the same or similar treatment will prove of great value in cases of puerperal fever and erysipelas?

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. T. G. MORTON.

Reported by J. J. KIRKBRIDE, M.D.

ENCIRCLING WOUND OF THE PENIS.

F. G., aged 44, was admitted October 30, 1874, with the following history. He had been drinking immoderately for some days; while in bed with his wife, had a difficulty with her regarding the possession of a few dollars. A fight ensued, which culminated in the wife seizing her husband's penis, which she pulled and twisted with all her strength, producing a severe wound, accompanied by serious hemorrhage. On admission, several days afterwards, a lacerated suppurating wound was found at the root of the penis, five inches from the glans, extending through the skin and involving the body of the organ, which it completely encircled, with the exception of a small isthmus on the under surface still remaining intact. The wound, which looked as if the circular sweep of a knife had been applied, gaped to the extent of half an inch, the skin being inverted around the edges, and the prepuce and penis very much swollen. At the clinic, October 31, Dr. Morton, after freshening the edges of the wound, approximated it by silk sutures. Frequent erections during the next

few days tore out most of these, however, and the parts are now healing by granulation.

Dr. Morton also described and exhibited the specimen from a case which occurred during his service in the hospital. A man, during an attack of mania a potu, had cut off his penis close to the body, with all the skin of the scrotum, and was, on admission, almost dead from profuse hemorrhage. The exposed testicles were finally covered by gradual cicatrization, and what remained of the penis was eventually glued even with the abdominal parietes, the urethra simply projecting on the surface, where its sensitive orifice was protected by a silver cap, held in position by straps around the body.

TWO CASES OF COMPOUND FRACTURE OF THE ELBOW-JOINT—EXCISION IN EACH CASE OF THE OLECRANON PROCESS.

M. J. M., aged 42, was admitted September, 1874. A few hours previous, had been kicked by a mule directly below the left olecranon process, which was entirely separated from the ulna; the joint being opened and the fore-arm luxated anteriorly. The olecranon was so much exposed and drawn upwards that Dr. Morton divided the triceps attachment and removed it, the wound being then carefully approximated with silver sutures, and the arm placed in a right-angled splint. Free suppuration was established during the next three weeks. Irregular chills followed the operation, and produced much prostration, but were controlled by large doses of quinine daily. The angle of the splint was constantly changed; the wound rapidly healed up, and, with the aid of a Stromeier's splint, good motion in the joint resulted.

A few hours after the previous case was operated upon, P. McJ., aged 51, was brought in with the same sort of injury, the result of a stroke from a drawing-knife, the first blow causing a scalp-wound with the chipping off of a thin layer of the skull, while the second blow produced an incised wound, completely dividing the left ulna close to the olecranon; the arm at the time being raised to ward off the attack. The olecranon was entirely separated and drawn upwards. As in the previous case, the attachment of the triceps was divided, and the olecranon process removed, the same treatment being adopted with excellent result, the wound closing up with fair motion in the joint.

TRANSLATIONS.

EXPERIMENTAL SEPTICÆMIA. — A communication from M. Feltz on this subject was read by M. Ch. Robin before the Académie des Sciences at a recent sitting. M. Feltz's researches are in continuation of those made some years ago by himself and Prof. Coze. They were undertaken with the view of ascertaining the infective power of septic blood compared with that of putrefied blood, and also of the septic activity of infinitesimal doses of both these kinds. The rabbit was taken, as before, for experimentation.

Four series of experiments were made by means of putrefied rabbit's blood. In the first, small quantities of the putrefied blood were injected, by means of a hypodermic syringe, under the skin of the animal's back. Seven rabbits were thus experimented upon, all of which died within a period of from three to six days, with the usual symptoms of infection. In the second series of cases, inoculation of the same blood by means of the lancet resulted fatally from infection in only one case out of nine. In the third series, inoculation of the same blood previously desiccated produced no effect what-

ever. In the fourth series of experiments, injection under the skin of a liquid which had been obtained from putrefied blood by means of dialysis gave no result in the case of the rabbits thus treated. The blood had remained for twelve hours in the dialyser; the osmotic liquid manifestly contained bacteria similar to those of the blood, and, in addition, traces of albuminoid matters.

A fourth series of experiments comprised a number of injections with the putrefied blood, diluted to a greater or less degree. These resulted negatively, none of the animals experimented upon having succumbed with symptoms of infection.

The conclusion drawn from these experiments was that, in order to prove toxic, the putrefied blood must be introduced into the economy in a proportion at least equivalent to one degree of the Pravaz syringe. Inoculations with the lancet, with infinitesimal dilutions or with dialytic dilutions, do not bring about fatal results. A similar series of experiments undertaken with septic blood gave quite different results; the injections proving almost invariably fatal.

The result of these experiments shows that septic blood acts much more energetically than putrefied blood; that septicity augments with successive generations; that it remains the same, however small may be the quantity of blood inoculated, provided that the inoculation is made without any admixture. It is exceedingly probable that the failures to inoculate with infinitesimal or dialytic dilutions is owing to the fact that the septic substance does not mix well with, and is not dissolved by, distilled water.—*Gazette Médical de Paris*, December 26, 1874. X.

THE DIAGNOSIS OF CONSTITUTIONAL SYPHILIS (Kaposi: *Wiener Med. Presse*, No. 4, 1875).—It has been asserted by many that constitutional syphilis may occur in patients who have never had chancre; and this assertion has been made because individuals with this disease have been met with upon whom neither chancre nor trace thereof could be discovered. To express infection of this kind, where no local lesion is found which can be looked upon as the point at which the virus enters the system, the term "syphilis d'emblée" has been used. Hereditary syphilis, too, is also a species of syphilis d'emblée, for here there is no transmission of the disease by a chancre. It must not, however, be forgotten that the possibility of infection in this way is but a supposition, even if it is a well-founded one. It must be remembered that a patient may appear to have contracted syphilis without having had a chancre, because, at the time the examination is made, all traces of the local lesion have vanished. With regard to chancre itself, it is a curious fact that a large proportion of physicians recognize but the two typical forms of chancre, hard and soft, and find themselves in a certain degree embarrassed when they meet with a sore of venereal origin which does not exactly correspond with the features of these sores as set down in the books. This evidently arises from the fact that these two types of venereal sores are those most frequently met with, and also from the influence of the axiomatic phrases in which Ricord expressed his theories, which have become so closely incorporated into all the literature of the subject and have exerted so powerful an effect upon the minds of all observers. Ricord was perfectly justified in devoting so much attention to these two types, and the practitioner also is, for it is a question of much moment in the formation of a prognosis, since, as a rule, a hard chancre is the precursor of constitutional syphilis, while the soft sore is not followed by any general symptoms. Neither Ricord nor any one else has, however, asserted that only these two forms of chancre exist. On the contrary, writers upon this subject have always affirmed

that other varieties of chancre are to be met with, and, to express these varieties, numerous qualifying adjectives have been used.

If a closer examination of this subject is made, it will be found that a different form of expression must be used to characterize correctly the appearances which are met with. As a rule, there results, at the point at which the syphilitic virus is introduced, a certain tissue-change. This is sometimes of the type either of a hard or a soft chancre, but often, on the other hand, not like either; so that the possibility of this "local" or "primary" lesion presenting varied appearances must not be lost sight of. There is frequently seen at the point of inoculation a condition which cannot properly be called a chancre at all, if by this term any ulcerative process be intended. In the fossa navicularis in women there is sometimes seen a sharply-defined reddened patch on the mucous membrane, which is of the size of a small coin, which is scarcely if at all ulcerated, or which may even be smooth and shining; and still, if patients thus affected are kept under observation, it will be found that symptoms of constitutional syphilis follow lesions of this kind. Among women it is often difficult to discover the primary lesion of the folds of the mucous membrane of the genitals, and, in addition to this difficulty, the typical forms of chancre are relatively infrequently found. There are frequently seen, on the genitals of women, simple tubercles in the follicles, which cannot be distinguished from ordinary acne, but which later are metamorphosed into crater-shaped chancres of the follicles, or into papules, which are followed in due time by an outbreak of general syphilis. It is further established that the products of so-called secondary syphilis are inoculable, and are capable of producing constitutional disease.

This fact has been long known to clinical observers, but the investigations of Waller, Wallace, etc., first overthrew the doctrine of Ricord, that there could be no syphilis without a chancre.

From all this, it can be seen that it is a very difficult matter to assert in any case that constitutional syphilis has not been preceded by a local lesion, for it is highly probable, in such cases, that the excoriation through which the virus entered has healed before the examination was made, or that the lesion, although present, may elude detection. W. A.

THERAPEUTIC NOTES.

TREATMENT OF DIPHTHERIA AND SCARLET FEVER.—Dr. G. Mayer (*Jahrb. f. Kinderk.*, vii. 4) is strongly in favor of the treatment of diphtheria by ice. Even in children under one year he directs small pieces of ice to be put frequently into the mouth, followed, if possible, every minute or two by a teaspoonful of iced water. The ice must be pure, and therefore all artificially prepared is best. In severe cases the external use of cold, by means of an ice-bag applied round the throat, is very useful. The author has found that by this mode of treatment the fever soon diminishes, and the diphtheritic membrane is detached and expectorated. It is only in exceptional cases that the disease extends nevertheless to the larynx. But in one case the author was obliged, in order to reduce the temperature, to resort to cool baths. The latter he also found very useful in scarlet fever. Whenever the temperature exceeds 102° in scarlet fever the patient is to be placed for ten minutes in a bath of a temperature varying from 93° to 73°, according to the intensity of the fever. The effect of these baths in reducing the temperature lasts for two or three hours.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION.

NO. II.

WE have the authority of Holy Writ for the assertion that "It is more blessed to give than to receive," but, so far as our observation goes, there is only one commodity concerning which all men are agreed as to the truth of the saying. All our readers will, no doubt, grant to us this morning the more enviable position; but we cannot help believing that if our offering were accepted with thankful hearts it would be better for the American Medical Association,—*i.e.*, for the American medical profession.

The first gift that we have to offer is to the county medical societies: it is, Appoint as delegates the best known and most able men, irrespective of age, who will *promise to go*. To these delegates we say, Having made the promise, *go*. If there be an uprising of the profession all over the United States, the American Medical Association will at once assume national importance. If, however, that importance is to be maintained hereafter, in our opinion, great care will always have to be exercised in selecting the places of meeting. If next year were not the anniversary of the nation's birth, we would say, by all means select Boston for the following session; as time is, however, of course Philadelphia will entertain the Association in 1876. We opine that the air of this latitude will be found even more salubrious than that of the great city of Denver, which, somehow or other, the Association has forgotten in its Western peregrinations.

There is one thing that sorely needs thinking about and discussion,—namely, what the Association can do, and what it cannot do; what should be its object, and what it should avoid.

In the first place, the *social* work to be accomplished by the Association is really of very great importance: to bring together prominent representative members of the profession from all parts of the continent so that they may fuse and unify is undoubtedly a great and most useful work. Upon this point, however, nothing more need be said; the matter is sufficiently plain. If the delegates go to Louisville, the social functions will, no doubt, be performed in a vigorous manner.

It is different with the question, What of scientific value can be achieved by such a body of men, and what are the best ways of reaching the maximum? There are two ways in which an association can advance the science or art of medicine: by discussions, and by encouraging individual work. A scientific debate, to be of real value, requires the highest talents and knowledge in those who take a part in it, and very little has ever been accomplished in this way in medicine save in the consideration of some great practical general question of a hygienic or purely clinical character. It is true that there have been in the world's history a few discussions of real value upon scientific medical subjects, such as the one upon tubercle in the London Pathological Society; but these debates were between men of the highest eminence and special training,—men who, no doubt, prepared themselves for the long-announced discussions in the most careful manner. Certainly nothing of the kind is possible at a meeting of the American Medical Association at present. It may be possible to have really valuable discussions of some purely clinical subject, but, if the past be any criterion, the *personnel* of the Association will have to increase in ability before this can take place; or, what is more probably the real necessity, some method of announcing the subjects beforehand must be found, for, with our present training, very few men in our profession, even of the highest talent and learning, would be willing to discuss before the world any of the deeper clinical questions of the day without special preparation. The Association may be able to wrangle over the crude assertions of a surgeon whose enthusiasm or contempt for the acuteness of his colleagues has led him to report half-cured cases as cures; but we do not believe that at present any really valuable clinical result is to be obtained by its discussions.

After all, the direct work done by associations

is in our science so small as to be comparatively nothing. Practically, all advances in the past have been made by the labors of individuals. The true work of societies at present is, therefore, to foster and encourage individual efforts. It is in this respect that we think our American Medical Association has failed most utterly; although it does disgrace itself continually by offering a beggarly hundred dollars for original essays, and yearly gets some which would be dear at any price.

In the name of American medical science, which is starving for want of encouragement, we beg of the Association to do something that shall be worthy of itself, and not endeavor to get what are among the highest results of human intellect—original researches in the most difficult of sciences—for a college prize. How infinite must be the conceptions of the leaders of the Association of the value of original researches! Perhaps if they themselves had performed more, they would have clearer ideas as to the amount of talent required, the expenses incurred, and the enormous labor involved in any first-class piece of original research. A hundred dollars! and the investigator expected to entomb his article in the Siberian wastes of the Society's Transactions!

Let the Association offer five hundred or a thousand dollars for an original essay or lecture to be delivered before it, and appoint judges who are not afraid to say no, and we may have some result of which we can be justly proud. "Hold! we have not the money to do this and publish our Transactions." Then stop publishing these Transactions, and put an end to our great yearly disgrace. In this day of competitive journalism, the medical press may be relied upon to publish whatever is of value,—a very small percentage, to be sure, of that which fills the massive tomes with which the Association has loaded our library shelves; but we are of the old-fashioned opinion that what is not worth publishing had better not be published. It is only the inveterate bibliophile who believes that what was worthless in manuscript becomes a treasure when clothed in printers' ink.

HOMŒOPATHY IN ASIA.—A new Chinese remedy for worms, syphilis, vomiting, and skin-diseases, and possibly for any other kindred malady for which the patient may take it, is prepared as follows: Maggots are taken from privies and washed, then dried in the sun, fried, pulverized, and either made into pills or eaten in powder. We think it would be better for the Chinamen not to get these diseases.—*New York Medical Record*.

LEADING ARTICLES.

THE USE OF COLD IN FEVER.

NO. III.

ALL those who have used the cold baths freely and successfully in typhoid and typhus fevers appear to be agreed that, although the mortality is very much reduced, the duration of the disease is only shortened in that complications are avoided. As, however, the patient is left by the disease much stronger than he is when the expectant method of treatment is pursued, convalescence is much more rapid than under the old plans.

The effects of the anti-pyretic treatment upon the symptoms of the disease are stated to be very marked, the intense prostration, delirium, stupor, carphologia, involuntary passages, and other manifestations of the typhoid state being avoided. It is affirmed that the relief afforded is so evident to both patient and attendants that they soon eagerly acquiesce in the regular employment of the cold baths, although to the one the sensations are usually very disagreeable, and for the other the labor and attention required are very much increased. A very practical question, but one which we are as yet scarcely in a position to answer fully, is, What are the contra-indications to the bath? According to our old ways of thinking, bronchitis and pneumonia would especially seem to be in the way of the use of cold in cases of fever. The serious lung-affections of these fevers are, however, largely dependent upon the general adynamia, and this adynamia is in turn largely the result of the excessive temperature. Accordingly, the German investigators have not found the baths to do harm in the pneumonias of these fevers. Liebermeister, who has had more experience than any other man, says that "pneumonia, hypostatic congestion, and the like offer no reason for suspending the baths; the hypostatic troubles sometimes disappear under their use." The same authority, however, somewhat inconsistently, it seems to me, affirms that perforation of or hemorrhage from the bowels is a contra-indication to the use of cold in fever, because cold has a tendency to produce determination of blood to the internal organs. The experience of Wunderlich (*Schmidt's Jahrbücher*, Bd. clvi. p. 101) is, however, very much opposed to this idea of Liebermeister's. He treated sixteen cases of severe intestinal hemorrhage with cold baths, with but two deaths; neither of which resulted directly from the hemorrhage, one being from intestinal perforation and one from severe pneumonia. This mortality is certainly a very small one, for out of thirty-two cases Griesinger had ten deaths; out of twenty-one Jenner lost seven; out of fourteen Gietl lost six; and Jaccoud had six deaths in six cases (*Pathologie Interne*, t. ii. p. 758). Bäuer, however (*Schmidt's Jahrbücher*, Bd. clvi. p. 101), is in agreement with Liebermeister in believing that the baths should be discontinued during intestinal hemorrhage. Yet their views seem to be based upon preconceived theory rather than upon actual trial.

Thus, Liebermeister says, "I have thus far ordered the baths entirely discontinued as soon as even slight hemorrhage from the bowels occurred." Menstruation appears not to be looked upon as a contra-indication. On the whole, the testimony seems to me to show that no local internal disease ought in the present state of our knowledge to be looked upon as absolutely contra-indicating the use of cold baths when the temperature is high in typhus or typhoid fevers.

It is otherwise when there is a general tendency to collapse,—when the heart is so weak that local stases of blood occur in almost all the internal organs. Under these circumstances the circulation has not sufficient power thoroughly to equalize animal heat, so that it is said to be entirely possible to cool the exterior of the body several degrees without materially affecting the temperature of the interior. One of the severe accidents which it is affirmed has very rarely followed the use of the cold bath in pyrexia is a sudden collapse, and clinical experience seems to indicate very strongly that when collapse is already existent the cold baths should not be administered.

In no disease attended with a long-continued pyrexia has the cold-water treatment been employed upon so grand a scale as in typhus and typhoid fevers; but the results there obtained are sufficient to indicate its usefulness in allied diseases. Of all the exanthemata, none is more constantly attended with excessive temperature than is scarlet fever. In this disorder the testimony to the value of cold is very strong. Going back to Cuvier, who really first systematized the abstraction of heat in fever, we find that he habitually practised in the most heroic manner cold affusions in the treatment of scarlet fever, and claimed the greatest success for the measure. Since his day the remedy has been employed with asserted good results by various observers, among whom may be mentioned Gérard, Bruère, Gianini, Armstrong, Laycock, Rilliet and Barthé, Trousseau, and Hiram Corson, of this State. The evidence is, unfortunately, too much generalized to allow of its being put in a statistical form, but for an extended résumé of it the reader is referred to the excellent article in Meigs and Pepper's work on the diseases of children. In almost all of these cases the cold was applied in the form of affusions, a method which is certainly far more terrifying to the child, and probably less efficient, than the cold bath. Recently, Dr. G. Mayer (*Fahrbuch für Kinderkrankheiten*, vii. 4) has been placing the child in a bath of from 93° F. to 73° F. (according to the intensity of the fever) for ten minutes, whenever the temperature rises above 102° F. He affirms that the effect was most beneficial, and that the reduction of temperature usually lasted for several hours. In *diphtheria*, cold bathing has been used to some extent, with seemingly good results. In both this affection and in anginose scarlatina it is of the utmost importance to combine the cold bathing with the local application of the ice-bag or ice-poultice to the throat.

It is in the highest degree probable that systematic cold bathing will be found serviceable in all blood-

poisonings with high temperature, such as smallpox, erysipelas, pyæmia, etc., but as yet we have no clinical evidence of moment upon the matter. The high temperature that prevails in sthenic pneumonia and certain other inflammatory diseases would appear to indicate the abstraction of heat; but how far the local disease will be advantageously or disadvantageously affected in these cases is as yet an open question. The only record of the systematic employment of cold bathing in inflammation of the lungs that I have met with is by G. Mayer (*Schmidt's Jahrbücher*, Bd. cxlix. p. 347). He is stated to have found that defervescence was materially hastened both in men and in children. Niemeyer and other German authorities advise the liberal use of ice to the chest.

H. C. W.

CORRESPONDENCE.

NEW YORK, February 9, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

AT a meeting of the New York Medico-Legal Society, recently, Mr. Edward Paterson, of the New York bar, read an exceedingly interesting paper entitled "Monomania as affecting Testamentary Capacity." After a few preliminary remarks, he said the imperfect condition of the law is displayed not only with reference to insanity, but there is current in the decisions of the courts, and in the general literature of the law, much of serious error respecting mental disease as influencing the testamentary capacity of the person affected by it. What is the most noticeable is that the state of legal knowledge and the results of legal decision on this subject seem to fluctuate between opinions of a hundred years ago and those of recent times; the former re-appearing and being reasserted when least anticipated, and receiving application and enforcement in the most unexpected quarters; and more especially is this to be observed in those litigations the facts of which indicate that the person whose testamentary act is assailed upon the ground of incapacity to make a will was, or was supposed to be, the subject of that mental malady which is now known to be a distinct and peculiar condition, and to which is assigned the term "monomania." By some it is claimed that any delusion disqualifies a person from making a will; while others assert that the old dogmas as to absolute alienation of mind are the true rules of decision on questions of testamentary capacity.

The general inquiry in all investigations concerning the mental condition of a testator should be, Was, or was not, the individual *compos mentis* at the time of the performance of the testamentary act? This is substantially the test as adopted by the court of appeals of the State of New York. That court, in the Parish will case, held that, "in law, the only standard as to mental capacity in all who are not idiots or lunatics is found in the fact whether the testator was *compos mentis* or *non compos mentis*, as those terms are used in their fixed legal meaning."

A lunatic, or one who is the subject of general mental derangement, is absolutely *non compos mentis*, and cannot make a will, except during the supervention of a lucid interval.

As to the term "lucid interval," the question is mooted as to whether there is any other condition than that of the presence or absence of the mental disturbing cause. If mental maladies are attributable to structural changes in the brain, it seems strange that there should be a suspension or cessation of the processes or the effects of processes operating such a change, and which suspension or cessation is merely temporary and intermittent; but the doctrines of the law on this subject are deeply laid, and now seem to be of general acceptance in the courts.

That unsoundness of the mind which is involved in all judicial inquiries as to a testator's ability to make a valid will may be either of two descriptions,—viz., general insanity or partial insanity. The recognition by the law of these divisions, which shortly necessitated the adoption of a rule especially adapted to each, marks a great and important era in the judicial history of insanity. Prior to the days of the American Revolution, the distinction, if taken by writers, or advanced by the more progressive and better-informed of the medical profession, had no favor in the courts of law. The English courts formerly entertained jurisdiction to avoid instruments upon allegations of mental incapacity only in cases of "total loss of understanding:" when "one by grief, sickness, or other accident wholly loseth his understanding." In the criminal courts, some attempt had been made to establish the doctrine that limited insanity excused crime; but the effort was unsuccessful.

Each of the two chief divisions of mental incapacity has applicable to it its peculiar and distinct rule of law:

1. When the evidence shows the testator to have been totally insane shortly before the time of the execution of the will, testamentary incapacity is presumed to have existed *at* the time of its execution, and the *onus probandi* is thrown upon those claiming the validity of the instrument to countervail this presumption by evidence of a lucid interval during which the testamentary act was performed.

2. In the case of partial insanity, or partial unsoundness of mind, generally evinced in the form of monomania, it devolves upon the contestants to show that the will is the direct offspring of that insanity; or, in other words, the burden of proof is upon the contestants to show that the partial insanity existed at the time of the execution of the will, and that to its existence and to its operation in and influence upon the mind of the testator their disherison is to be attributed.

Several instances cited prove that in cases of partial insanity or monomania, unless the contestants can clearly trace their disherison to the delusion of the testator existing at the time of making the will, the legal presumption is of testamentary capacity, as this always attaches until it is countervailed by some express proof.

The rule with relation to disqualification from testa-

tory power in cases of monomania as stated finds valuable illustration in cases in which delusions of a more or less insane character have been proven as isolated conditions, not directly affecting the wills or depositary provisions of those subject to them (and in which cases, therefore, the testamentary acts have been sustained), as it does in those in which from their circumstances the inference was inevitable that the existence or operation of the delusions caused the testator to withhold his bounty from those who should have received its benefits. The essayist summarized his views, by way of conclusion, as follows:

The law as it now stands and should be administered upon the subject of partial insanity (and almost all the cases of partial insanity are cases of monomania purely) is of comparatively recent origin; that it is the product of improved knowledge respecting the diseases of the mind, and of more liberal as well as accurate views respecting the freedom of the will, and the restraints proper to be put upon testamentary powers; that it consists of a rule applicable to all cases of the character under consideration, but one which is affected by the general tendency of the courts to revert to antiquated ideas upon topics resting purely in authority,—a rule which is liable to be lost sight of in the attempts to find in cases of monomania evidence of a general insanity. It does not require that to prevent the making of a valid will a man must be bias and thwart in all his mental processes; but it is a rule which discriminates in favor of those who are the natural objects of his bounty and affection; and it prevents injury and injustice being done to such because of a testator's delusion, fancies, and irrational prejudices, in cases where they have evidently affected his acts; but it does not deny the testamentary privilege to the man whose eccentricities, beliefs, follies, or infatuations may be as absurd and fantastic as the incoherencies of a half-remembered dream, provided in all other affairs of life he is of competent judgment, and his vagaries have not led him to do injustice to his kindred, or to harden his heart against those who are the proper objects of his testamentary bounty.

N.

REVIEWS AND BOOK NOTICES.

ELECTRICITY FOR NERVOUS DISEASES. Translated from the German of Dr. F. FIEBER, by GEORGE M. SELWIG, M.D. 8vo, pp. 60. New York, G. P. Putnam's Sons, 1874.

MEDICAL AND SURGICAL USES OF ELECTRICITY. By GEORGE M. BEARD, A.M., M.D., and A. D. ROCKWELL, A.M., M.D. Third Edition. 8vo, pp. 800. New York, William Wood & Co., 1875.

Putting these volumes side by side reminds one of the enormous elephant and the mastiff which are such close companions in our Zoological Garden. Yet the two books have at least this in common, that they approach their subject from the one point of view. For, like theology, electro-therapeutics has two distinct methods, that of faith and that of doubt, and it strikes us that what some of the old theologians taught, "to doubt is

to be damned," must be the creed of many of the prominent modern electro-therapeutists. Unfortunately, we are, like Thomas of old, a doubting disciple, and, whilst we do not presume to take the Hebraic style of argument,—Show me the other man who has seen one hundred thousand cases of skin-diseases, and I will listen to what he has to say contrary to my teachings,—yet, the farther we have progressed in practical experience with electricity, the greater reason have we seen for not putting confidence in princes. The works before us are, then, works of faith as well as of healing. The smaller of them we shall dismiss with a single quotation: "In *migraine*, electricity is a true specific." In our experience, migraine is the one form of so-called functional neuralgia in which galvanism is of the least possible use.

The work of Drs. Beard and Rockwell is an exceedingly elaborate and complete one, and may be accepted as one of the best existent expressions in regard to electro-therapeutics from the enthusiastic point of view. As an instance of how faith affects a man's reasoning power, we cite the following, which is brought forward as proof of the anæsthetizing value of the electrical current: "We had teeth extracted while a strong faradaic current was passing through, and feel assured from this personal experience that electricity caused the pain to be less sensitively felt. That the pain caused by the prick of a pin, for example, is less sensitively felt when a strong faradaic current is passing through the part where the puncture is made, we have practically demonstrated on the hand and other parts of the body." Probably a red-hot iron would also have an anæsthetizing influence, so that a prick of a pin during its application would not seriously incommode the patient. Again, speaking of perspiration being produced by galvanization of the cervical sympathetic, "To produce sensible perspiration usually requires a strong current and a long application. We have observed this effect more frequently and more markedly in the susceptible and the nervous." When a boy, the mere quiet statement, "After supper I will have a settlement with you," produced a very sensible perspiration, which in our ignorance we have attributed to the sympathetic ganglia at the other end of the trunkal ellipse! Leaving all facetiousness aside, of course pain and excitement will make a strong man sweat, much more a nervous person, and of course the same influence will alter the heart-beat. The whole argument which Drs. Beard and Rockwell bring forward to prove galvanization of the cervical sympathetic during life appears to us a fair example of the way in which strong faith and a want of application of the doubting principle have raised a mighty superstructure of electrical therapeutics. Our authors acknowledge (p. 129) "that the ordinary therapeutical measures for electrizing the sympathetic do not produce the same effects as direct applications to the ganglia." Yet they claim that in these measures we do galvanize the same ganglia; and why? Because in their experiments, using very strong currents, they have seen hysterical women become hypnotic, a sense of warmth diffused through the system, with sensible perspiration, the pulse sometimes accelerated, sometimes lowered, and because other observers have seen or imagined they saw the pupil sometimes slightly dilated, sometimes slightly contracted, and the retinal vessels sometimes dilated, sometimes contracted; all of which inconsistent and contradictory phenomena, to our mind, evidently were the result of psychical influences exerted upon either the observer or the patient. Galvanization of the sympathetic ganglia when performed by the physiologist yields *always* a fixed, definite result so plain and so visible that a child could not mistake it; the laws which govern the passage of the electrical currents and the anatomical structure of the neck are

such as to render it exceedingly improbable that any appreciable amount of electricity can reach the ganglia when the current is applied to the exterior in the usual method, and the clinical evidence of any action seems to us like bones taken from an ancient cemetery,—fair to look at, but falling into powder when touched. We have experimented largely upon the living animal and upon man, and do not believe that it is possible, by the use of any ordinary therapeutic currents, sensibly to affect the cervical sympathetic. Yet electro-therapeutists, if we are to believe their statements, cure the most distant diseases by galvanization of the cervical sympathetics; diseases, too, which have no anatomical or physiological relation with the ganglia. Verily, the spirit of Hahnemann must be again among us.

One thing that has aided in increasing the asserted value of electro-therapeutics is the absolute forgetfulness so often indulged in of the principles of electrical science. Our authors are not altogether clear in this matter. It follows as an absolute necessity from Ohm's law that a galvanic current has but one attribute,—current strength; our authors fully endorse not only Ohm's law, but also this generalization, in that they say "large cells do not send more quantity electricity through the body than small cells of similar character;" yet we read (p. 142), "so obtain a number of currents varying in quantity, tension, and physiological power."

In concluding this review, we wish to state clearly that we do not mean to criticise the book of Drs. Beard and Rockwell so much as the school to which it belongs. We recognize its authors as able, laborious men, although we do not believe in the correctness of their methods of generalizing, and of their deductions. Yet in these things they are certainly in accord with the vast majority of the writers on electro-therapeutics, and we are almost alone. It is with great heartiness that we recommend our readers who want a book viewing the subject from the stand-point of enthusiasm to buy the work of Drs. Beard and Rockwell, not merely because it is American, but because it is one of the most complete in the language. We beg of them, however, to remember that there is a spirit of enthusiastic faith which in science means death, and to season their trial of the teachings of the book with that spirit of doubt which is at the basis of all true progress in medicine.

H. C. W.

SELECTIONS.

HEMORRHAGIC INFILTRATION OF THE PANCREAS AS A CAUSE OF SUDDEN DEATH.—Certain observations recently made on this subject by Professor Zenker, of Erlangen, and communicated by him to the meeting of the German Scientific and Medical Association at Breslau, would appear to be of great importance to the physiologist, practitioner, and medical jurist. Cases of hemorrhage into the pancreas, associated with sudden death, have very rarely been recorded; they are probably more common than is believed, for Zenker met with no less than three within twelve months (*Daily Bulletin of the Forty-seventh Meeting of the German Scientific and Medical Association*). The facts observed were very nearly similar in each instance: a corpulent subject died suddenly, or was found dead; post mortem, the only fresh pathological appearance was extensive hemorrhagic infiltration of the pancreas and neighboring connective tissue, and advanced fatty degeneration of the pancreatic parenchyma. Further, there was found, in two of the cases, bloody effusion in the duodenum; and, in two, excessive hyperæmia of the semilunar ganglion.

The coincidence of these remarkable pathological conditions with the occurrence of sudden death indi-

cates, according to Zenker, the great importance of the observation from a forensic point of view: henceforth the pancreas must not be omitted in the examination of the organs after sudden death. In one of the cases, indeed, Zenker was able very strongly to urge that the subject—whose body was found in the water—had probably not committed suicide, but had dropped dead into the stream. On the other hand, these cases very readily remind the physiologist and surgeon of death by mechanical injury to the abdominal viscera,—of what is usually termed “shock.” It is an interesting fact that in two of the cases, as has been described, the semilunar ganglion was hyperæmic; and it is further a fact that in one at least of these the heart was found in precisely the same condition as that of the frog after Goltz’s familiar *Klopfversuch*, or tapping experiment,—namely, relaxed, and empty. And Zenker believes that, whether directly or indirectly caused, paralysis of the heart must be regarded as the immediate cause of death in these cases.—*Medical Times and Gazette*, January 9, 1875.

TRANSPLANTATION OF THE CONJUNCTIVA OF THE RABBIT FOR THE CURE OF SYMBLEPHARON.—In December, 1872, Dr. Wolfe, of Glasgow, brought before the Medico-Chirurgical Society of that city an important paper on the possibility of transplanting the conjunctiva of the rabbit, and of introducing into the human tissues grafts from the lower animals, in cases of that most distressing and unsightly disease, symblepharon. As is well known, treatment of this very intractable condition has rarely been successful, and any means for remedying it are most welcome. Abroad, Dr. Wolfe’s method has attracted great attention, and the latest contribution to its history has been two cases related by Carl Becker, of Heidelberg, one of the most distinguished ophthalmologists on the Continent, in the *Wiener Wochenschrift*. It is, moreover, to be noted that other methods had been adopted in these, and had proved unsuccessful. In one of Professor Becker’s cases, too, he had a particularly bad subject,—a tiresome, troublesome child. No wonder, then, that in this case a portion of the graft died; but enough remained to effect a cure. The success which has attended these trials by Dr. Wolfe and Professor Becker not only proves satisfactorily that animal tissues can be incorporated with human structures, but also opens out many suggestions for the future. It may not be always necessary to employ the tissues of animals to obtain our end, but success by such means gives, as Herr Becker says, happy auguries for the future.—*Medical Times and Gazette*, January 23, 1875.

PENETRATING WOUNDS OF THE KNEE.—M. Gayet, Surgeon of the Hôtel-Dieu at Lyons, on the strength of eight cases treated in that hospital, arrives (*Lyon Médical*) at the following conclusions:—1. A penetrating wound of the knee-joint, made by a pointed instrument, and unattended by complications, is without danger, provided it be allowed to cicatrize in a state of rest and immobility. 2. The same wound may give rise to the most dangerous arthritis when not properly attended to. 3. The danger of arthritis is in direct proportion to the extent of the wound and the difficulties which impede its union by the first intention. 4. The complications dependent upon injuries of the bones are extremely serious; but fractures of the patella, however complicated they may be, need not, if they exist alone, lead to amputation or excision. 5. The presence of foreign bodies, however small these may be, induces arthritis and its possible consequences, and demands amputation or excision. 6. All things being alike, posterior wounds seem more serious than anterior ones, by reason of the density and the number of the tissues concerned, the presence of vessels, etc. 7. These conclusions having been deduced from observations made

in a hospital,—i.e., in a medium little favorable to conservative surgery,—they may be regarded as more favorable when applied to media of a more healthy character.—*Medical Times and Gazette*, January 30, 1875.

GLEANINGS FROM OUR EXCHANGES.

SYPHILIS (*Medical Press and Circular*, January 20, 1875).—Dr. Schuster, of Aix, comes to the following conclusions (*Deutsche Zeitschr. f. Prakt. Heilk.*, 1874):

1. No general mercurial treatment is required for ulcers appearing after suspicious contact. Local treatment suffices; cleanliness, and the external use of iodoform in powder or ointment. The reason of this axiom is, we cannot speak clearly about syphilitic infection until its manifestations appear, or generally before from three to five weeks after the suspected connection; during the three to five weeks’ period of incubation we are not in the position to recognize the entry of the syphilitic infection, and therefore there can be no need of speaking of mercurial treatment.

2. Against the primary induration, with swelling of the glands, we should adopt treatment by vapor-baths and iodide of potassium, since through these appearances it is made clear that the virulent infection has passed through the neighboring glands and entered the blood, and iodide of potassium is preferable in this stage to mercurial treatment, since experience teaches that when mercury is used too early it loses its effect when the disease remains a long time, and it requires frequently to be repeated.

3. Against the secondary and tertiary appearances of syphilis (exanthems, gummata, diseases of the bones and internal organs) mercury has its best indications. It is contra-indicated in those amyloid degenerations of the greater or lesser glands (liver, kidney, etc.), united with universal cachexia, which are often joined to the tertiary period; in such cases even small doses cause loss of strength and salivation. On the other hand, some disturbances of the health, unconnected with syphilis, do not exclude mercury. In acute epidemic diseases occurring with syphilis, we must shun mercury; these diseases already by themselves weaken the syphilis. Tuberculosis in syphilis is made worse by mercury. If, after a certain time, the syphilitic symptoms do not give way, although mercurial appearances show themselves, mercury must be left off; and here sulphur hot baths are useful in bettering the constitution and the symptoms of the disease, since they free the body from the mercury which has been used to saturation, and help to regulate the physiological processes.

CASE OF VARICOSE VEINS TREATED BY A NEW OPERATION (*The Lancet*, January 23, 1875).—Mr. John Marshall reports the case of a laborer, æt. 38, who suffered such severe pain from a varicose condition of the saphenous veins, particularly that of the left leg, that he was unable to work. Mr. Marshall operated for his relief in the following manner. After standing for half an hour with a carbolized cloth round the left leg, the patient was put under chloroform, and the operator then marked on the skin with ink the course of the tortuous vein below the left knee for about nine inches. At each end of this mark he ligated the vein by means of a pin passed under the vein, with a piece of bougie and a figure-of-8 suture over the vein; two other similar ligatures were placed above the upper one at distances of two inches apart, and a fifth ligature was placed two inches below the lower one. The pins, bougie, and threads had all been previously carbolized. Esmarch’s elastic bandage was then applied to the whole limb,

with the effect of completely emptying the varicose vein, even in the intervals between the several pins. He then made a straight incision through the skin from the top to the bottom of the tortuous ink-mark, and, with a director and knife, slit up the vein along the whole of the exposed portion. As the vein then formed a very large, irregular, folded mass at the bottom of the wound, he passed a ligature round it above and below, and removed it entirely with forceps and scissors, cutting through two large veins opening into it. A strip of carbolized gauze was then placed in the wound, and the limb put up in the complete antiseptic dressing. The operation was done under the carbolized spray. There was *no bleeding whatever* during the operation.

Two months later, the patient was discharged, cured, the diseased vein having been satisfactorily obliterated above and below the part which was removed. Mr. Marshall says that in future he should make an incision through the skin in a direction best suited to the position and form of the straight or tortuous vein, expose the vessel, which is very easy of accomplishment, put a carbolized ligature on it above and below, and then seize one end of it with a tenaculum forceps and dissect it out. The application of Esmarch's bandage would render this operation perfectly bloodless, and no subsequent hemorrhage need be feared from the lateral veins, however large, which open into the part removed, for this could be prevented by a long pad of gauze placed in the wound.

CASE OF AGGRAVATED SYMPTOMS OF RENAL CALCULUS CURED BY AN EXPLORATORY INCISION (*The British Medical Journal*, December 19, 1874).—Mr. Thomas Annandale reports the case of a woman æt. 36, who, about two years before she came under observation, had been seized with a pain in the left lumbar region, and, at the same time, passed blood with her urine. These symptoms had continued more or less since, but had become much aggravated during the last five months. The patient was somewhat emaciated, and she complained of pain over the region of the left kidney, shooting down in the direction of the ureter. There was frequent micturition, with pain in the act; and an examination of the urine showed the presence of blood, pus, and crystals of the triple phosphate in it. Her temperature was 100.4°. There was well-marked tenderness on pressure over the left kidney, but no fluctuation or enlargement could be detected. The patient's other internal organs were apparently healthy, but she suffered from attacks of vomiting. Internal sedatives, hypodermic injections, and soothing external applications were carefully tried, but without affording any relief. As the symptoms pointed very markedly to an irritation of the left kidney, caused, most probably, by the presence of a calculus, an exploration was recommended, and was consented to. An incision, about seven inches in length, was accordingly made in the left lumbar region, and was carried along the outer border of the erector spinæ muscle, and, the layers of the lumbar fascia having been divided and the fascia transversalis scratched through, the kidney and upper portion of the ureter were freely exposed. A most searching examination of the kidney and greater part of the ureter was made, but no abnormal condition of the organ could be discovered, and no calculus could be felt. The operation was performed under the antiseptic spray, and, the edges of the wound having been brought together with antiseptic silk stitches and a drainage-tube inserted, carbolized muslin was applied in the usual way. For the first three days after the operation the patient suffered severely from sickness, but this was relieved by small quantities of opium, and iced champagne and brandy. In a few days she was entirely free from the old pain and other symptoms,

which had not returned during a period of six months. The wound healed easily, and the cure was apparently complete.

TUMORS (*The British Medical Journal*, December 19, 1874).—In some observations on the structure of tumors in relation to their character and clinical history, Mr. W. S. Savory advances the following theories:

The difference between homologous and heterologous growths is this: that in homologous growths the development is normal, but is carried out in the wrong place and under abnormal conditions; in heterologous growths there is more or less wide deviation from normal development. But there is no defined line of demarcation between the two. The whole difference turns upon the direction development takes, and the degree to which it proceeds. The tissues which are simplest in structure and mode of development are most apt to form the substance of tumors, as, for example, connective tissue. The most elaborate tissue in these respects—striated muscle—is very rarely, if ever, found as a distinct morbid growth, and it is comparatively rare to find even unstriated muscle as a separate mass in the substance of tumors. In the elementary structures of tumors, there is an inverse ratio between the tendency to progressive metamorphosis and the tendency to reproduction. The less the structures of which a tumor is composed tend to change from their primary or embryonic form, the more abundantly will they multiply; so that those tumors whose structures retain most nearly their primary form are the most malignant. And as the structures of a tumor are capable of transformation, so do they lose their power of repetition; so that those tumors which consist most completely of fully-formed tissue are the most innocent.

VENESECTION IN THREATENED ŒDEMA OF THE LUNG.—Dr. E. H. Hamill, of Islip, N.Y., contributes the following item of experience:

Mrs. L., aged 46 years, height 4½ feet, weight 150 lbs., on January 5 started to walk three-fourths of a mile to catch a train to New York. She felt perfectly well at starting, with the exception of a slight cold she had contracted two days before. After walking a few rods she felt some difficulty in breathing; although she walked slowly, the dyspnoea increased, she was obliged to stop, and in a few minutes became unconscious.

When seen by myself, her condition was as follows: unconscious; lips, face, and hands blue; pupils dilated; urgent dyspnoea, with constant effort to cough; a thin serous sputa running from the mouth; tracheal râles abundant, and easily heard at the bedside; pulse scarcely perceptible, slow; auscultation revealed abundant moist râles all over the chest. Diagnosis: congestion, with rapid œdema of the lungs; prognosis: death imminent.

Treatment.—Ten ounces of dark, almost black, blood were taken from the arm. The effect was surprising; the tracheal râles disappeared, and the breathing became easier. Administered three gtt. croton oil. In one hour the patient was conscious, all alarming symptoms were gone, and the next morning she was pronounced well.—*Medical Record*.

BELLADONNA IN THE TREATMENT OF PROFUSE PERSPIRATION (*The British Medical Journal*, December 19, 1874).—Mr. Anthony Butler has prescribed belladonna to upwards of thirty patients, most of them suffering from phthisis pulmonalis, but a few from other diseases. It was given at bedtime in pill, in doses of one-eightieth of a grain. The results have been very encouraging. In about one-half of the whole number of patients, after from one to four pills the perspiration was either checked altogether or diminished in amount.

In other cases no decided effect was produced till it had been used for about a week or ten days. In about a third of the cases no apparent benefit resulted, and the medicine was discontinued. In some of these cases the perspiration did not recur in a few instances, even after the medicine was stopped; but in others it returned, and was again checked when the pills were resumed.

INCONTINENCE OF URINE IN CHILDREN (*The Boston Medical and Surgical Journal*, February, 1875).—Dr. D. H. Hayden, M.D., believes that the four points which seem to hold out the best prospect of curing this complaint are—

1. The training the child to retain its water, in the daytime, as long as possible.
2. The use of the cold douche.
3. The moderate use of fluids towards night, and total abstinence from tea.
4. The internal use of belladonna, given in increasing doses till its specific effects are produced.

MISCELLANY.

A MEDICO-LEGAL ARGUMENT AGAINST CREMATION.—It is stated in the Allahabad *Pioneer* of November 23 last that the results of the inquiry into the attempt at poisoning Colonel Phayre, the Political Resident at Baroda, have been communicated to the Government of Bombay. It is said that the man who gave the poison to the Resident's servant or servants died suddenly in the city on Tuesday last, and that his body was burned almost immediately afterwards. It is suspected that the man has been poisoned. However great may be the sanitary advantages of cremation over burial, there can be no doubt that the former system of disposal of the dead opens a ready way for getting rid of the traces of poison; and until the obvious objection to cremation for this reason be removed by stringent precautionary measures, it is hardly likely or desirable that it should be generally adopted.—*Medical Times and Gazette*.

A GOOD deal of laughter was occasioned in the French Chamber the other day, when Dr. Testelin, in demanding a school of medicine for Lille, in addition to those proposed for Lyons, etc., declared that the number of doctors had decreased in the town that he represents, while the population had increased. The doctor appeared astonished at the amusement caused by this statement.—*Medical Record*.

WOMEN-DOCTORS IN RUSSIA.—Fourteen women have this month completed their medical studies at St. Petersburg, and are fully qualified to practise. The Society for Aiding Sick and Wounded Soldiers has energetically supported the women-doctor movement in Russia.—*Medical Times and Gazette*.

AN AFFECTING DISSECTING-ROOM SCENE.—The janitor of an Indianapolis medical college was deeply affected on recognizing his mother-in-law on the dissecting-table. His grief was the more poignant from the fact that he had himself carried the stolen corpse up three flights of stairs.—*Medical Record*.

READY FOR AN EMERGENCY.—According to the editor of the *Union Médicale*, a female practitioner in Paris was recently so overcome by the gush of blood in a case of post-partum hemorrhage that she fainted. By the time she recovered, the patient was dead.

NOTES AND QUERIES.

"CRITICISM" CORRECTED.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In your edition of February 6, 1875 (no thanks to the writer, however), appears what is "so called" a "criticism" upon an "hypothesis" assumed to have been claimed by myself in article iv. vol. xx. No. 5, Whole No. 116, of the *New York Medical Journal* for November, 1874.

I do not intend to reply to the "critic" professionally (at least not at this time), for reasons which follow:

1. He does not quote my article "candidly and honestly," or "in full;" and
2. What is quoted is done (to be generous) in a slovenly manner; and
3. The text seems to have been "criticised" without due regard to its subject-matter, either in letter or import.

Far be it from me to unjustly impeach the motives of any one, but when twenty-three and a fraction of lines which contain qualifying phrases are omitted by our "critic" from my article, then and there is the accepted time to cry for further light.

For the information of the profession, I will state that I still retain the views embodied in the criticised article. I hope at some future time to amend that article. By the assistance of time, which is the great developer of all that is valuable in science, literature, and arts, as well as men, I shall also enumerate other syphilitic lesions which were evolved during the treatment of the case, and which were inadvertently omitted in my article.

With respect,

ISAAC SMITH, Jr., M.D.

FALL RIVER, MASS., Feb. 11, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In the *Times* for January 9, among the clinical notes contributed by Dr. William Hunt, I notice the heading, "Are the Kidneys Active Eliminators of Ether?" In this connection, a case which I had the opportunity of observing about a year ago may have some interest.

The patient, a gentleman of about fifty, was to be subjected to an operation upon the eye, for which it was necessary to administer ether. As he was very readily nauseated, and as, of course, vomiting was to be avoided if possible, the ether was carefully given, but, nevertheless, a very considerable quantity was inhaled before unconsciousness was produced. After the operation I fully expected nausea, but of this there was not a trace. The patient, however, urinated freely, passing at frequent intervals a large amount of urine, which evolved an enormous amount of ether vapor.

I mentioned the case at the time to several of my surgical friends, with the suggestion that perhaps the administration of a diuretic before the inhalation of the ether might obviate some of its unpleasant after-effects, but, so far as I am aware, the experiment was never tried.

Very truly yours,

H. B. HARE.

THE writer of the letter published in our issue of February 6, concerning the use of an infant's ring in lacerated wounds of the scalp, was Dr. James M. Laing,—not Janes, as we interpreted his chirography.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 16, 1875, TO FEBRUARY 22, 1875, INCLUSIVE.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability, with permission to leave the limits of the Department. S. O. 10, Department of California, January 30, 1875.

BENTLEY, EDWIN, ASSISTANT-SURGEON.—Granted leave of absence for one year. S. O. 28, A. G. O., February 16, 1875.

PHILADELPHIA MEDICAL TIMES.

SATURDAY, MARCH 6, 1875.

ORIGINAL COMMUNICATIONS.

ON THE USE OF NITRITE OF AMYL IN VARIOUS FORMS OF SPASM, AND ON ITS VALUE AS AN AID TO DIAGNOSIS.

Read before the Philadelphia College of Physicians, February 3, 1875,

BY S. WEIR MITCHELL, M.D.,

Member of the National Academy of Sciences.

THE history of the employment of nitrite of amyl in epilepsy and in other forms of spasm is brief, and necessitates the mention of but few persons. Excepting its use in angina pectoris and in asthma, this powerful agent had been little resorted to when, in April, 1872 (see *Philada. Med. Times*), I reported cases of its use to arrest epileptic attacks. During the same year I advised Dr. Jenks to test its value in puerperal eclampsia, which he accordingly did do, reporting his success in the same journal in 1873. During that year (*Arch. Sci. and Prac. Med.*, No. 4, p. 311, C. E. Brown-Séquard and E. E. Séguin, New York), Dr. Wharton Sinkler, then my assistant at the Infirmary for Diseases of the Nervous System, related a remarkable case in which nitrite of amyl had been freely used with admirable results. Since then, in the *Medical Times* and in the *Reporter*, July 25, 1874, I have more briefly alluded to the value of this agent as a means of diagnosis.

I make this statement as an introduction to what I shall have to say of the nitrite, for two reasons: first, because it shows that what I shall state is founded on no brief or recent experience; and second, because it seems to be unknown in England that it had been long used as an antispasmodic agent in America. I infer this from the fact that Dr. Crichton Browne (*West Riding Lunatic Asylum Medical Reports*, 1873), in a very able essay on nitrite of amyl in epilepsy, while recognizing its value, does not allude to its previous successful employment in this country.

In this present paper I propose to bring together all that I have done or suggested as regards the use of this powerful agent.

For more than a year I had been aware that nitrite of amyl would be a proper means to use in epilepsy. It was clear to me that the nitrite caused, with rapidity, fulness of the vessels of the whole head, and that near to the outset of an attack of epilepsy there is a condition of vasa spasm. I hoped that I would be able by the use of the nitrite to counteract this state of vascular contraction, and so to break the chain of morbid phenomena, and thus end the attack before its more disastrous consequences should follow. This reasonable expectation was not disappointed. I was, of course, well aware that in most cases of epilepsy there would be no time to secure the inhalation of enough of nitrite of amyl to produce an effect, but I was also aware that in at least two classes of epileptics the opportunity for its use would be given. There are rare examples of

epilepsy in which the warning of the coming on of an attack so far precedes the spasm and loss of consciousness as to enable the patient to inhale the nitrite. In other cases the patient has a succession of fits within a limited space of time, and being then, of necessity, in bed, is so placed that a watchful nurse may find time to use the nitrite. I waited long for my first chance, but in March, 1872, the opportunity came. I give this case at length as I first reported it in the *Philadelphia Medical Times*, April, 1872.

J. C., æt. 23, was excessively prone to self-abuse until, at the age of eighteen, he began to indulge to an extravagant extent in venery. At twenty he had a chancre, but thus far no secondary results. On the 4th of March, 1871, he became slightly intoxicated, went to a neighboring city, and for some days gave himself up to sexual excitements to such an extent, as he described it to me, as to show that either he had unusual virile power or that he exaggerated his prowess. Be this as it may, there is no doubt that he ran into great excess, and that the punishment was distinctly born of the offence. On March 9 he felt feeble but nevertheless had connection four times that night. On the 10th he had, twice, twitching of the left forefinger. On the 11th this grew worse, and on the 12th, after unusual sexual excesses, he had a prolonged spasm of the left arm. It began in the hand, and in a few minutes involved all the fingers in forced flexion. Then the wrist bent, and the flexed fore-arm was forcibly contracted. The attack, which surprised the patient but did not alarm him, ended with slight vertigo. A week went by without further trouble, when a series of complete epileptic fits began, always preceded by the local convulsions which I have described. The fits, which at first came on daily, soon lessened in number, and of late have recurred but once a week. On two occasions they have been sudden and without warning, but in all other cases the hand has been affected with spasm, followed in a few minutes by vertigo, twisting of the head to the left side, left unilateral convulsion, and, finally, bilateral spasms, with occasional tongue- or cheek-biting. The attack is followed by prolonged stupor.

Many remedies have been vainly employed, and even the bromides in full doses failed to do more than lessen the number of attacks; while strychnia, valerianate of quinia, and other agents have all alike failed to afford relief.

I made many experiments with a view to cutting short the fit by interfering with the precedent local spasm; but neither blisters along the nerve-tracks, which are not tender, nor a ligature tightly applied, proved of any use. I then gave the patient a drachm of chloroform in a phial, directing him how to inhale it from a handkerchief, but soon found that he was unable to inhale enough of it to serve his purpose. As a last resort, I gave him in a very small phial three or four drops of nitrite of amyl, and showed him how to inhale it by putting the open phial up one nostril while with one finger he closed the other and then made a few full inspirations. The first attempt failed, because, as he said, the spasm of the left limb made him nervous. On the second occasion he began to breathe it the instant the fingers twitched, having pulled the cork of the phial with his teeth. In a few moments he felt his face flush, the carotids beat violently, his head felt full, and, the spasm ceasing, the attack at once, and for the first time in his experience, was cut short. Four days later he thus cut short another attack; and the experiment has since succeeded in eleven fits, and failed, from too late use of the nitrite, in two. More-

over, the attacks have lessened in frequency, and now come on only once in ten or twenty days. Not only is there no evil effect from the drug, but his memory has improved. He is again taking bromide of lithium.

The case above quoted has since then continued to improve. During the last two years and a half he has had only seven fits, the last being nine months ago. I said seven fits, but in reality only one fit, all of the others having been cut short by the nitrite. A year ago he ceased to employ any bromide, and has been since then using only phosphorized cod-liver oil with strychnia.

Since this case demonstrated for me the remarkable power of this agent to check spasm, I have given it for that purpose a number of times, its value being limited by the rarity of cases in which there is time to secure its full inhalation. In some of my examples the chance of using it has been occasional only, not all of the attacks affording the time needed to secure its value.

J. C., æt. 32, was a good case of this. He had fits about once a week. The persistent use of thirty-grain doses of bromides kept the case in control; but two or three days' omission of this agent was sure to bring about a return of the attacks. His fits came on with a violent spasm of the thumb of the right hand. In most instances they became general too rapidly to admit of interference, but perhaps once in three or four times there was at least a minute of painful spasm of the right member before the loss of consciousness. On four occasions this man was able to use the nitrite, and in each case the fit was aborted.

In both of these cases the warning was in the form of a commencing unilateral spasm. In the following case there was a gastric aura which preceded the fit by an interval so long as to enable the sufferer to inhale the nitrite.

Miss E., æt. 26. Has had epilepsy seven years. Her whole history it is needless to relate. About one minute before the fit comes on, Miss E. has a sense of what she calls "goneness," at the epigastrium. This sensation passes into nausea, and apparently the fit interferes with the consequent vomiting which very rarely follows.

This form of aura is certainly rare. In a single case, during the war, I saw an epilepsy in which emesis, lasting half an hour, preceded the fit. It was cured by full doses of emetics given promptly at the moment nausea was felt. In Miss E.'s case the fits have gradually lessened in number and severity under the use of full doses of nitrate of silver. The nitrite of amyl instantly arrests both the nausea and the subsequent fit; but the sense of fulness in the head so alarms Miss E., who is a highly nervous and emotional person, that she is very averse to using it.

The following case, which, apart from the use of amyl nitrite, is one of the most remarkable known to me, was reported by my former clinical assistant, Dr. Wharton Sinkler, in the *New York Archives of Medicine*; but as these were seen by but few, and had a brief existence, I make no further apology for quoting enough of it to show how valuable the nitrite of amyl may be during the epileptic state.

James M., æt. 24, single. November, 1871, fell ninety-five feet, and had fractured ribs, dislocated ankle,

and fracture of the lower dorsal spine. Unconscious one week. Subsequent palsy of legs, and insensibility. He was five months in this state, and had all of this time incessant headache; then he began to have convulsions, and lost hearing and speech.

When he entered the Infirmary for Nervous Diseases, he walked on crutches, but the left leg was palsied totally and much contracted. The tongue and velum were paralyzed, and he was deaf and speechless.

On the fourteenth day after entering, he had a fit, and they became almost incessant. Blood was taken from his neck, and almost at once hearing came back, but the fits, which were violent, continued.

Nitrite of amyl was now used. It checked a long fit instantly, and after this it was given whenever a fit took place and it could be used in time. In every instance it aborted the fit.

It is needless to say more, save that he became, under various treatment, a strong and really quite vigorous man, able to do a hard day's work.

With this case I close my evidence as to nitrite of amyl in epilepsy. I have never seen it fail where there was time to use it. Last week I suddenly checked with it a fit coming on in my office, and a few months ago had the chance of exhibiting to those present at my clinic its capacity to stop for hours the convulsions of tubercular meningitis in a child.

From what I have seen of this agent, it does not seem to possess, in most cases, any capacity to lessen the probability of a return of the fits; but of its power to arrest the actual convulsion there can be no doubt. As I have already mentioned, I asked Dr. William Jenks to test the nitrite in puerperal convulsions. His evidence as to this point still awaits confirmation by other observers.

I have spoken of the use of the nitrite in the convulsions of tubercular meningitis. I have not yet used it in forms of spasms from peripheral irritation in children, but it would be, I should think, a safe and a ready agent. Neither has it been as yet employed in the horrible convulsions of uræmia.

Before passing from this subject, I am tempted, at the risk of some detail, to speak of a case which is remarkable for the fact that the patient is liable to several, at least three, forms of attack, and that the nitrite while it checks one of these does not seem to affect the second form, and as to the third, far from relieving, only makes it worse. This case has never been published, and I do not hesitate to give it in full, since it is of extreme interest, and distinctly illustrates the possibility of a patient being subject at one time to attacks involving anæmic states, and at another to those which are attended with opposite conditions.

The patient is a cultivated and energetic clergyman, æt. 35, a resident of a neighboring city. He is free from obvious physical disease, and, despite his disorder, is capable of doing, and does do, an abundance of work, involving sometimes severe taxation of mind and body. There is some doubtful evidence as to a sunstroke in his later boyhood, but his first attacks of *petit mal* seem to have come on during the war, while in service with the militia, — known as the six-months' men. At this time he was physically over-taxed, and was greatly exposed

to the summer sun, and slept at night without shelter. I shall leave his graphic statement of his case to tell its own very interesting story.

DR. S. WEIR MITCHELL:

May 21, 1873.

MY DEAR SIR,—I have been troubled for some time past with certain seemingly nervous attacks, the precise character of which, however, I fear it may be very difficult for me to explain, inasmuch as it must always be necessarily hard accurately to describe our feelings in words. But, that I may be able the more clearly to set before you the symptoms accompanying them, I have taken the liberty, simply for my own convenience, of dividing them into several classes, each of which seems to me to have its own peculiar characteristics.

1. Those which have come to be most serious with me, I have learned to denominate as attacks of forgetfulness. My first feeling when one is coming on is of severe oppression across the chest, which sometimes makes it very difficult for me to breathe, and always causes me at once to try to get into the fresh air. This I seldom accomplish, however, as the oppression is almost instantly succeeded by a nervous feeling which creeps over my whole body, and seems to change all the conditions of my existence. I unconsciously move my mouth as if chewing, and sometimes will also grit my teeth. The things around me seem to be moving, and, if I am reading, the book will appear to be going from me, when at once I feel as if all must be a dream, though well knowing at the same time that it must be reality. Then everything seems to leave my memory, and I keep continually striving to connect my thoughts with some event in the past, which seems to be hanging over me, but which I cannot yet recall. Indeed, my whole state of mind at such a time may be best compared to the feelings of one suddenly awakened out of a sound sleep. He cannot catch hold of the dream which seems to be quickly passing from him, and at the same time he cannot yet appreciate the state of consciousness into which he has so suddenly awakened. And thus unable to realize his surroundings, and equally unable to grasp the quickly-fading past, he remains in that disagreeable intermediate state, so to speak, which each one of us has at times experienced.

Now, just so it is with me in these attacks. There is always something going from me which it is impossible for me to recall, and, at the same time, an inability to realize the actuality of my surroundings, while through it all, the fear of some impending catastrophe seems to be hanging over me. This fear seldom goes with the attack, and sometimes, if the attack has been a severe one, will haunt me for three or four days afterwards.

During these attacks I can walk, talk, or use my hands, though everything I take hold of has a strange feeling to my touch. They last generally from two to four minutes; when a considerable belching of wind takes place, and immediately things begin to assume an appearance of certainty about me. But then a violent perspiration pours forth from my forehead, and a feeling of extreme prostration and weakness in the knees comes over me. The past which had gone from me, however, only returns to me by degrees, and some things which have thus faded from my memory never return. For example, books which I have read previously, and even marked and made notes upon, may be taken up by me afterwards as entirely new books. Sermons which I have written with considerable care may be read by me as productions which I had never seen before, and different cities or places may be visited as entirely new sights; while, on the other hand, there are things which I will continue to remember with even more than ordinary distinctness; and books that I have read and sights that I have seen years ago seem to have an equally strong hold upon my memory.

I can give no rule for that which I forget and that which I remember. The first of these attacks which ever came to me occurred in the summer of 1863. I had gone out with the militia at the time of the Gettysburg raid, and such was the extent of the forgetfulness caused, that at the time I could not recall where I was and how I came to be there, and many of the incidents and places of the campaign, fresh in the minds of my companions, have ever continued to be an utter blank in my memory. I may add that we were without tent-shelter, and that I was thus exposed both day and night.

2. The second class of attacks I would denominate as paralyzing. They come on very much as the others, but more suddenly, and the feeling of oppression in the first is rather one of hollowness in these; then at once my right hand becomes fixed across my breast, and I lose all control over my words. My mouth moves even more than in the other attacks; and while I can enunciate, yet I am unable to converse, as I cannot recall even the most familiar words or forms of expression that I may endeavor to. The same feelings of uncertainty usually surround me as in the others, though by no means as severe. But no perspiration or such extreme weakness follows, and the general after-effects, though of the same nature, do not begin to compare in their severity with those of the former. The signal for the discontinuance of these attacks is likewise a belching of wind, and indeed this is the case with all of them, whatever be their nature. This class of attacks does not date back over a year.

3. Both these classes of spells may occur at night, and, unless I am awakened by some one, I will generally sleep through them. But I would immediately awaken any one who was near me, by the peculiar smacking of the mouth and gritting of the teeth to which I have alluded. This does not date back over six months.

4. Flush attacks also come upon me rarely. They commence as though I were going to have a severe attack of forgetfulness, but seem to be turned off sometimes by the power of my will, and sometimes by the mere belching of wind, while others culminate only in a severe perspiration.

5. Ordinary attacks of dizziness are common to me, though without any of the feelings or effects which accompany any of the former attacks. Yet they are sometimes so severe that in my walks I must sit down, or go up to a store-window where I can stand still, have something to hold on to, and shut my eyes. These are generally controlled by an effort of the will if taken in time.

6. Scarcely a day passes that I do not have at least one spell of double sight; and in analyzing such double sight I have found that the false image is made by the right eye, and seems to fall from one to six inches above the object. I always have spots in front of the right eye, and which sometimes seem to form themselves into an image of the eye about one foot in front of it. These three classes of attack (4, 5, 6) date back from twelve to fifteen years.

7. I have considerable and severe pain through my right eye. It generally begins with a severe headache in the early morning, which by ten o'clock has entirely settled in the eye.

I have been troubled with this eye-ache for fifteen years, and it was wont to come regularly every week on Sunday, though lately it has been far less frequent, and very irregular in its return. It has not seemed to have any connection with my other attacks until recently; but now, when an attack comes on while I am suffering from pain in the head or the eye, the pain, be it ever so severe, will leave me during the continuance of the attack.

Apart from these troubles, I enjoy very good health,

though I always have an excess of wind in the stomach and bowels, and am continuously afflicted with a severe catarrh in the head, and considerable thick phlegm. The raising of wind, as I have said, often prevents the culmination of an attack. I have no headache with the exception of that spoken of, which is a beating one, never lasting beyond ten or eleven o'clock in the morning.

Despite the existence of stomachal symptoms, no amount of attention to the stomach and no form of diet seems to make much difference in his attacks. I have all along regarded his case as allied to epilepsy, and was glad to find that Dr. Hughlings Jackson, who has seen him, shared this opinion. In its favor is the fact that the bromides are capable of giving him great immunity from the fits, but when used in the full doses required they rapidly enfeeble him, and very soon weaken his memory, so that they have to be used with the greatest caution, and guarded by the constant employment of arsenic. The eye-ground presents no peculiarities. He speaks of several forms of head-trouble. In the spasmodic attack the right thumb is first turned inwards; then the fingers, and lastly the wrist, are forcibly flexed. Rarely the neck is twisted, and more rarely the right face. This form of fit is cut short by the nitrite. As the face flushes the attack passes off. The spells of pure giddiness have been frequent of late. They come on suddenly, and there are none of the strange mental conditions which attend the other spells. Now, in these vertiginous fits, the nitrite if used early only hastens the culmination of the trouble, and, he believes, greatly intensifies it.

I have made frequent use of nitrite of amyl in a variety of forms of disease, chiefly spasmodic, some of them hysterical, and some of indeterminate birth and relationship.

Its influence over cases of hysterical angina is as well marked as in those of men, or in non-hysterical attacks of this disorder. I have twice employed it in forms of disease which are akin to angina, are not infrequent, but lack a distinct name.

Here is one which may pass as an illustration.

A middle-aged lady, after many and grave trials during the late war, began to suffer from occasional attacks which came at any time in the day, held no relation to conditions of the stomach or uterus, but were at last most frequent and distressing. A sense of fulness at the epigastrium announced the attack, and from the stomach a sort of aura, accompanied with a feeling of panic and terror, passed up into the head, with intense pain in the right neck and face, the infra- and supra-orbital region, and at last a few moments of deadly pallor ended the attack, which occasionally wound up with nausea and rarely with emesis. There was no irregularity of the heart, no pain in the arm, only a slight quickening and enfeeblement of pulse towards the close of the attacks, which usually lasted from one to five hours, and when I saw her were of daily occurrence. After a trial of many means, I at last used the nitrite of amyl. The effect was singularly happy, and it was very rare that it failed to break up and dispel the trouble. After a time I gave her a small vial of the nitrite, and this she continued to use, her attacks growing less frequent and less severe. When I heard last from her, they were still under control of the nitrite.

I come now to speak, and with rather more hesitation, of the use of this agent as an aid to the diagnosis of certain forms of cerebral disorders.

Those who see much of neural diseases meet very

often with cases of head-troubles in which there are attacks of vertigo, or disturbed equilibrium, or mere sense of fulness with or without mental disorder. Occasionally these troubles are plainly not epileptic. Sometimes they are either epileptic and distinctly so, or else are the far-away beginnings of that malady. Sometimes a therapeutic diagnosis is possible, and the mere fact of the bromides controlling them may, when taken with the symptoms, clearly settle their nature. But very often our suspicions are in favor of their being purely vascular disturbances of congestive type, and then I think that the nitrite of amyl may prove serviceable in settling the question; since in such cases the inhalation will sometimes recreate briefly the train of symptoms, so that they are at once recognized by the patient. This, when it occurs, is fairly conclusive as to the attacks having been truly congestive in character. The negative has also its value. Personally I have obtained useful help from this means, but I look upon the whole matter as one which it is well to present to the profession as worthy of study, without at present claiming for it any very great utility.

I give below cases to illustrate the use of the nitrite in diagnosis:

E. L., accountant, a very nervous and irritable person, æt. 29. Has spells, two or three times a week, in which he is said to lose consciousness, without any co-existent spasm. On other occasions the trouble does not go so far as this. Has been told the attacks are epileptic. On inhaling nitrite of amyl, he said at once, "That is the kind of feeling I have in my attacks." Then he asked to have the inhalation repeated, and again recognized the symptoms as like those he had had. I came soon, thus aided, to understand, with no doubt in my mind, that his fits were coincident with relaxation of the arterioles. He was rapidly cured by full doses of digitalis with general tonics and cold shower-bath.

I. C., æt. 40, lawyer. This gentleman has vertigo, in which external objects float around him, from right to left. He does not know if he flushes in the attacks. I can find no reason for them in the state of any extracranial organ; nitrite of amyl causes in him the usual symptoms, but no trace of vertigo. This is a fair type of many cases in which I have used nitrite of amyl. It never reproduces the vertigo.

Robert H., æt. 38; a master of an oyster-boat; had a slight sunstroke in August, 1873. Ever since, he has a great deal of vertex headache, with now and then severe attacks of general headache. I was inclined to believe that the vertex pain was due to subacute meningitis. It was suddenly made worse by nitrite of amyl, to which he was very sensitive. I have said that it was made worse; it was in fact increased by this drug to such a degree for a few minutes as made me regret my experiment.

I might multiply these examples. In some cases the nitrite has failed to help me, in others it has returned a useful negative, in others a still more valuable affirmative. I shall add but a single case.

Mr. Ph. C., æt. 43, had, ten years ago, a malarial fever, followed by a sharp attack of cerebral peripheral meningitis. From these diseases he recovered, but has had ever since, at brief and briefer intervals of late, left frontal headaches. Within six months these are accompanied with certain very curious disturbances of speech, which last for but a few hours during the height

of the headache. At these times he pronounces certain words as if the first letter or first syllable had no existence. Thus, a very bad dog would become a *ery ad og*. Sometimes he adds the first syllable of one word to the next, and its first to that of the preceding word. Thus, a bad dog would become a *gad bog*, and so on. In these attacks the left temporal artery throbs visibly and most remarkably, but the face does not flush. The attacks occur always after dark, but when I gave him nitrite of amyl in my office I suddenly re-produced the headache and the train of peculiar lingual phenomena. He said *top* for stop. *Hat turts*, that hurts. *Thy med robs*, my head throbs. The effect passed off suddenly, and his usual control of language returned.

As to this case there could, I think, be little doubt that the cause lay in an over-readiness of the vessels of the left anterior cerebral lobes and sub-jacent meninges to fill up with blood, and so for a time to disturb the nutrition and function of the parts concerned.

I find physicians very timid as to this remedy, but, after much and long use of it, I have altogether lost the dread of it with which I began. I would suggest that in syncope and in hysterical convulsions it might well repay a trial, and that possibly in the cerebral symptoms arising from shock it may also prove of value, and should be essayed in the cold stage of ague.

ON THE DETECTION OF ORGANIC MATTER IN DRINKING-WATER.

BY CHARLES McINTYRE, M.D.

AS the time is approaching when the medical societies in the several counties of the State will prepare their reports to the State Society, and since a resolution, adopted at the Easton meeting, instructs the county societies to incorporate in their reports certain facts as to the condition of the potable waters when in the vicinity of graveyards,—among other things, as to their purity,—a few words on the examination of such waters may be of interest.

A full examination of the character of a potable water as to its organic constituents is, perhaps, one of the most difficult problems in the ordinary run of analytical chemistry. There is organic matter decomposed, decomposing, and ready to be decomposed, to be looked for; a discrimination to be made between organic matter of all grades, from the perfectly inert up to the pestilence-producing; and, more, these frequently can only be recognized by the products of decomposition, usually the same from all classes mentioned.

R. Angus Smith (*Chemical News*, xix. 278) thus classifies the organic material:

1. Organic matter decomposed or putrid.
2. Organic matter readily decomposed, and probably ready to become putrid.
3. Organic matter slow to decompose.
4. Recent organic matter.
5. Old organic matter.
6. Animal organic matter.

While this is the case, yet, for a physician's practical purposes, there are a few tests which would put him on his guard, and at least give more accu-

rate results than relying solely upon the presence of ammonia, as recommended in connection with the resolution of instructions.

It is foreign to our purpose to discuss whether, under the conditions of the resolution, ammonia would be always present if the water was contaminated; but, since an examination is in contemplation, we wish to suggest the method of obtaining more reliable results.

The tests described are all in use by experts in water-analyses; they have been altered, in some cases, in the details, so that they can be applied by any physician with an ordinary amount of apparatus. Of course, only *qualitative* examinations can be made, and approximative results obtained. While these, for purposes of scientific investigation, or even for a full report on the wholesomeness of any water, would be nearly useless, nevertheless, for the purposes indicated they are of more value than the more delicate tests or the *quantitative* determinations, since they can be used on ordinary occasions, while the latter would require the special apparatus of a chemical laboratory with the skill of a professed chemist. This distinction is insisted upon, because the whole subject of the determination of organic material in water is, if not in midnight gloom, only in the morning twilight; and so much has been written purporting to give accurate results while only employing these approximate methods, that the not yet cleared-up subject has been made rather the more misty by such work. But to plunge in *medias* without further preface.

We may have organic material—

I. As to its derivation: *animal*, or *vegetable*.

II. As to its condition: *not decomposed*, or *decomposed*.

a. If not decomposed, either (1) in the same form as it exists in the organism, or (2) changed into some complex organic substance.

b. If decomposed, it may exhibit any of the products of decomposition down to the purely inorganic,—e.g., carbon dioxide, nitric acid,—and these may be present along with organic material, which may escape detection.

III. As to its effect: *deleterious*, or *harmless*.

This classification is sufficiently extended for our purposes.

If the organic material is of animal origin, the nitrogen compounds will ordinarily be more abundant. These are the compounds which are supposed to exert the greatest influence in causing the water to be unwholesome.* Unfortunately, most of the methods will not enable us to tell of the source of the organic material, and in doubtful cases it may be difficult to decide as to the condition of the water.

If a quantity (f3viii) of water is evaporated care-

* The presence of ammonia, or even, perhaps, of albuminoid substances (not readily putrescible), does not of necessity render the water unfit for domestic purposes, or even prove the presence of recent organic material. A case in point is mentioned by R. Angus Smith (*loc. cit.*, p. 281), of waters from the hills of Scotland, Wales, and elsewhere, showing evidence of large quantities of ammonia, and even, according to the later researches of Prof. Wanklyn, of what he terms albuminoid ammonia, more being found in the water from these bare hills than from the rich plains. Yet there is no apparent source for injurious organic matter. This is only another instance of the doubts and difficulties of water-analysis.

fully to dryness in a clean porcelain or glass vessel, and then heated gently, the blackening of the residue will indicate the presence of the more stable organic compounds, which will all disappear by a further application of the heat with access of air. If during this latter operation there is any deflagration or rapid combustion, it indicates the presence of nitrates in the water. A very rough approximation of the amount of this organic matter can be made by weighing when dry, and again after it has been burned off. There are very few waters so free from organic matter as not to leave a blackened residue, while at the same time it would be possible to have a water rich in organic material which would leave little or no char. This test, then, is of use when the amount left is greatly in excess of the char from comparatively pure water.

Allow another portion of the water to stand in a warm place, exposed to the light, for several days. Should the water become putrid or show the presence of animal or vegetable growths, either to the naked eye or by the aid of the microscope, there should be grave doubts as to the fitness of the water for domestic purposes,—the gravity of the doubt of course depending upon the extent of these conditions. It is asserted that at times organic matter is contained in water in such a condition as not to respond to the ordinary reagents until after it has undergone some decomposition. Consequently, in a suspected water, if no reactions can be obtained in the fresh water it would be advisable to let a portion stand as above, and then test.

The presence of ammonia, nitrous and nitric acids, any or all, indicates the presence of nitrogen in the water. It is possible, however, for this nitrogen to have its origin in inert organic material, or even to have an inorganic origin, and, hence, exercise no deleterious effect upon the water. Their presence is suspicious, and should always be looked for.

Nessler's reagent is perhaps the best test for ammonia. This reagent, the preparation of which is given in any text-book on analytical chemistry, and also in the Transactions of the Medical Society of Pennsylvania, x. 19, may be extemporaneously prepared by adding to a solution of potassium iodide (1 pint of salt to 20 pints of water) a solution (1 to 16) of mercuric chloride (corrosive sublimate) until a permanent precipitate is produced. Then add about twice the volume of liquor potassæ, let stand for a few days, and decant from the sediment. This will be delicate enough to detect an exceedingly small quantity of ammonia; a brownish precipitate or coloration being formed, depending on the amount of ammonia present.* If there is much testing to be done, the reagent had better be prepared according to some formula.

Nitrous acid is readily detected by its power to liberate iodine from potassium iodide, which is manifested by its action on starch paste. Prepare some starch paste, add about one-eighth the volume

of the solution of potassium iodide, acidulate the water with hydrochloric acid, or, preferably, sulphuric acid, in order to liberate the nitrous acid if it is combined as a nitrite, and then add the mixture of starch paste and potassium iodide. The immediate formation of the blue iodide of starch will indicate the presence of nitrous acid. It is hardly necessary to add as a caution the necessity of using pure acids and of having clean vessels; a failure to have either would render the accuracy of the results open to doubt. To test for nitric acid, the unignited residue had better be employed. Dissolve some morphia, or, better still, brucia, in a drop of sulphuric acid, on a piece of white porcelain; it should develop no color; if now a few pieces of the solid residue be added, the presence of nitric acid will be shown by a rose-red coloration in the former instance, or a deep blood-red if brucia has been used.

In many cases the organic material is readily oxidized by means of potassium permanganate. Render the water slightly acid by means of sulphuric acid, and drop a few drops of a solution of potassium permanganate; the solution becomes decolorized, owing to the permanganate giving up its oxygen for the oxidation of the organic material. This test, while not a reliable one when used with so few precautions, may, nevertheless, act as one witness among many to prove the character of the water.

When the water may be contaminated with sewer-refuse, there is a large increase of the alkaline salts, notably common salt,—sodium chloride,—the chlorine of which can readily be detected after rendering it strongly acid with *pure* nitric acid, by a solution of silver nitrate, a white curdy precipitate being formed. Since this salt is normal in small quantities in most waters, the resulting precipitate should be quite decided to indicate any sewage-matter.

There is one other test, which, while it requires more laboratory manipulation, should be noticed, since it attempts to give us intelligence of animal matter while still in an albuminoid condition. This is the test known as Chapman and Wanklyn's test (*Jour. Chem. Soc.*, xx. 445, 591), and depends on the principle that a solution of caustic potash and potassium permanganate is able to cause the nitrogen of albuminoid substances to enter into combination with hydrogen and form ammonia, which then can be detected by Nessler's reagent. To apply the test, it is first necessary to remove all ammonia in the water, as well as urea, which readily changes into ammonia; this is done by distilling a portion of the water until portions of the distillate give no reaction with the Nessler solution; then add a strong solution of potassium hydrate and a solution of potassium permanganate; collect the distillate, and examine again for ammonia. Its presence indicates albuminoid material in the water.

An examination of this sort, while it takes but a comparatively short time, may be of great value in investigating the source of a certain class of diseases. The necessity of pure drinking-water is so generally admitted, and the grave results from using impure water have been so fully written upon

* Instead of attempting to describe the reactions, it will be better for the experimenter to make a few preliminary tests with waters in which have been placed ammonia, nitric acid, albumen, urea, or whatever is to be looked for, should he not be already familiar with the reactions.

of late, that, even if it were not foreign to the purpose of this paper, it would be a vain repetition to dwell upon them.

Should such an examination be undertaken by any of our county societies for their next report, I would suggest the desirability of tabulating their results, in order to make them useful for comparison. A uniform method of reporting would aid this; and I would offer the following, perhaps as convenient as any.

Rule a sheet of paper so as to form ten columns. In the first, give the place and date of collecting the water; in the second, the topographical and geological conditions required by the resolution. The third is devoted to the physical appearance, taste, etc. In the next six place the results of the testing (no column is given for Wanklyn's reaction); while in the remaining column the other information as to zymotic diseases, and whatever information is necessary to be given, along with the name of the examiner, can be included under the heading of remarks, thus:

WATER FROM.	TOPOGRAPHY AND GEOLOGY.	APPEARANCE.	EVAPORATE TO DRYNESS AND IGNITION.	PUTRESCING TEST.	POTASS. PERMANGANATE.	NESSLER'S TEST.	STARCH AND POTASS. IODID.	MORPHIA OR BRUCIA.	REMARKS.
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PHILADELPHIA, 129 NORTH 18TH STREET.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS.

Reported by D. C. ALLEN.

STRANGULATED FEMORAL HERNIA—SYPHILITIC CARIES OF THE LEG—STONE IN THE BLADDER.

CASE I.—The first case, gentlemen, that I shall bring before you is a woman, aged 40, suffering from strangulated femoral hernia. She has been troubled with the affection for six years, a truss having been worn during this time. Thirty-six hours ago she was seized with severe pain in this situation, and it was discovered that the bowel had become strangulated. An attempt was immediately made at reduction, but was not successful. The patient was sent to bed, an anodyne given, and ice-bags applied to the groin. After some hours the taxis was again carefully tried, but, as before, reduction could not be effected, and an operation is therefore required without delay. This form of hernia is by far more frequent in women than in men, while inguinal hernia is more common in males. Femoral hernia may be mistaken for various affections, from which it is of great importance that it should be distinguished. The most common of these are inguinal hernia, enlarged lymphatic glands, and psoas abscess. Ordinarily but little difficulty occurs in regard to the distinction between femoral and inguinal hernia, remembering that in the former the neck of the tumor is below Poupart's ligament, while in the latter it is above that line. From an enlarged lymphatic gland or a psoas abscess, femoral hernia can generally be readily distinguished by a careful examination and an inquiry into

the previous symptoms. The constriction in this form of hernia may take place either in the true hernial sac, or at the internal or external femoral ring. During the operation the patient is anæsthetized, and the thigh is flexed upon the pelvis and inverted in order most completely to relax the fascia lata in the region of the groin. I make a vertical incision three inches in length, by pinching up a fold of skin directly over the tumor, transfixing it, and cutting from within outwards. The skin and cellular tissue being divided by this incision, with great care I divide layer after layer upon the grooved director, pushing aside the lymphatic glands to avoid wounding them. The anterior sheath of the vessels is now divided, and, passing my finger up, I search for the seat of the stricture, which is found to be at the lunated border of the external ring. A probe-pointed bistoury, guarded by the finger, is passed up to the constricting band, and cutting upwards and slightly inwards the stricture is divided. Ascertaining that the bowel is in a fit condition to be returned, its contents are gently squeezed out, in order that it may be the more easily pushed back into the abdomen. Although the constriction is completely severed, freeing the strangulated bowel, yet the latter cannot be returned into the abdominal cavity, owing to its firm adhesion to the inner surface of the sac. This condition is due to the long standing of the affection, and constitutes an irreducible hernia. The wound is carefully approximated by sutures, and a compress and bandage applied. After all such operations a truss must be worn. During the after-treatment the patient must be kept at rest, anodynes given, and the bowels locked up for some days.

Case II.—The second patient is a girl, aged 21, laboring under syphilitic disease of the right leg, presenting itself in rupial ulceration of the skin and extensive necrosis of the tibia. Five years ago she had manifestations of the specific disease, and two years later, well-marked constitutional symptoms were developed. Her mother has suffered from the same disease, and the affection in this case is doubtless transmitted.

The lower two-thirds of the leg, and also the foot, are so extensively diseased that amputation is the only measure likely to be productive of any benefit. It is a matter of much moment to decide whether amputation shall be performed above or below the knee. On examination, the upper third of the leg is apparently sound, and hence I shall remove the limb a little below the junction of the latter with the middle third. The patient is under an anæsthetic, and Esmarch's bandage is applied from the foot upwards to force the blood up into the body, and the elastic cord applied to arrest hemorrhage during the operation. I shall amputate by the circular method. The integument is divided down to the aponeurosis by a circular cut, and dissected back two and a half inches. Then the muscles are divided in a similar manner down to the bone, on a level with the reverted integument. The muscles are separated from their connection with the bone for about an inch and a half, and forcibly retracted. The saw is now applied as closely as possible to the soft structures, and held perpendicularly, dividing first the fibula, and lastly the tibia. The bones are trimmed off smoothly with the bone-pliers, and the bleeding vessels secured by ligatures. The wound will be allowed to remain open for two hours, when it will be approximated with sutures and adhesive plaster. The patient, being weak and much reduced, will be put upon supporting and invigorating treatment, and, after she has sufficiently recovered, specific remedies will be employed.

Case III.—The next case requiring our attention is one of urinary calculus in a boy 13 years of age. He has had trouble in his bladder since he was two

years old, and for the last six years has had the rational symptoms of stone, such as incontinence of urine, pain in passing water, frequent micturition, and interruption in the flow of the urine. To determine with certainty the presence of the stone, a sound is introduced, and immediately comes in contact with the foreign body, which is distinctly heard and felt. The patient was prepared for the operation by administering, on the evening previous, a brisk purge, to clear out the alimentary canal. The urine has been retained for several hours, to distend the bladder moderately, to prevent injury to its walls, and to facilitate the extraction of the stone. An anæsthetic is given, the thighs are flexed upon the pelvis and separated from each other, and the buttocks brought down to the edge of the table. The staff is introduced, and the curved portion lodged in the bladder is made to bear slightly to the left side of the perineum, and hooked up closely against the pubic symphysis. Oiling the index-finger, it is passed into the rectum to promote contraction of the bowel, rendering it thus less liable to be wounded by the knife. With a slender, sharp-pointed bistoury I make the incision by entering the point at the raphé on the left side of the perineum, an inch above the margin of the anus, carrying it obliquely downward and outward a little below the level of the tuberosity of the ischium, and a little nearer to this point than to the anus. Guarding the knife with my index-finger, I extend the incision deeper, dividing some of the fibres of the transverse perineal muscle and a portion of the triangular ligament. The membranous portion of the urethra is exposed, and, feeling for the groove in the staff, the knife is passed into the bladder, dividing a portion of the neck and prostate gland. As soon as the knife enters the bladder, the urine flows out. The opening into the bladder through its neck and the prostate gland is enlarged, if necessary, with the finger; passing my finger into the bladder, I feel the stone. The staff is now withdrawn, and, introducing the forceps, the calculus is grasped and extracted. The bladder is washed out by injecting into it a full stream of tepid water from a large syringe. The patient will be placed in bed upon a draw-sheet, and, if he suffer much pain, an anodyne will be given. As the lad is very weak, and much reduced from protracted suffering, quinine and iron, with the most generous diet, will be ordered.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. H. C. WOOD.

DIABETES INSIPIDUS—RECOVERY.

CHARLES T., æt. 55, a painter by occupation, entered the hospital on the 15th of September, 1874. At the time of his admission he complained of little but an all-pervading sense of lassitude and debility, which had been growing upon him for a year or more, and which finally had obliged him to throw up his occupation and enter the hospital. Upon investigation, the man was found to be of an extremely nervous and excitable temperament, but no symptom of importance was discoverable, except that he was daily passing an amount of urine much above the normal. The patient had first noticed this increase in his urine during the summer of 1873, and was inclined to ascribe it to drinking cold spring-water while much exposed to the sun. Repeated careful examination failed to show either albumen or sugar in the discharge. In other words, the case was one of diabetes insipidus.

The following table shows the date and the number of ounces of urine passed in twenty-four hours, and the treatment. The diet was uniform.

DATE.	URINE, OUNCES.	TREATMENT.
Sept. 15	168	Gallic acid, gr. x, t. d.
" 17	172	
" 25	160	Gallic acid stopped. Ordered assafoetida, gr. x, t. d.
" 30	168	
Oct. 3	180	Assafoetida stopped. Opium, gr. ss, t. d.
" 6	180	
" 9	174	
" 10	190	
" 11	178	
" 12	184	Ordered zinci valerian., gr. i; opium, gr. ¼, t. d.
" 13	160	
" 14	140	
" 15	100	
" 17	96	
" 18	56	
" 19	48	
" 25	46	
Nov. 1	43	The man's general health very much improved.
" 13	43	The treatment has been the same since October 12. All drugs discontinued.
" 30	44	Man discharged well and hearty.

TRANSLATIONS.

THE CYANIDES IN ACUTE RHEUMATISM.—Dr. A. Luton, of Rheims, publishes in the *Bull. Gén. de Thérap.*, January, 1875, an article on this subject. He begins by alluding to the innumerable specifics which have been vaunted in acute rheumatism, their very number suggestive of want of faith in any or all of them.

He specifies, in particular, propylamine and trimethylamine, as well as colchicum. Of the latter he says that it is the best remedy heretofore known, and were he to cease using the cyanides in rheumatism he should certainly return to colchicum. Its full benefit, however, is not gained until it is pushed to an almost semi-toxic extent. The factitious production of a gastrointestinal catarrh, which is the effect of the use of this remedy, is, however, nothing in comparison to a disease which threatens existence not only at the moment but at any future time.

After describing his method of administering colchicum, Dr. Luton goes on to say that, in his opinion, the cyanides, particularly those of zinc and potassium, are destined to replace this drug in the treatment of rheumatism. He then gives a number of illustrative cases in which these cyanides were used with the happiest effect. The cyanide of zinc is a white powder, insoluble in water, easy to form into pills or to administer in suspension in some mucilaginous fluid. It possesses neither taste nor odor, and may be given without the patient's knowledge. In spite of this, its physiological and therapeutic properties are real. It doubtless dissolves in the gastric juice. The doses in which Dr. L. gives this cyanide vary from three-fourths to one and a half grains, two grains, or even three grains, in a single day. The cyanide of potassium, pure and well prepared, is perhaps to be preferred, he thinks, to the salt of zinc, on account of its evident activity. In mixture he has given it in the dose of one and a half grains a day. On account of its disagreeable taste and the rapidity with which it alters in solution, it is best administered in the form of pills, coated with silver. It is not advisable to go beyond two grains per day; though cumulative effects are not to be feared.

At a certain point the physiological effects are produced: frontal headache, vertigo, nausea, some colic, occasionally slight diarrhoea; more frequently the stomach is advantageously stimulated, the appetite improves, and digestion becomes easier. Finally, the cyanides

bring about a certain degree of general sedation, and tend to produce sleep.

"It is certain," concludes Dr. L., "that the cyanides cure acute articular rheumatism, in its original form and in its diverse transformations. It cures by shortening the duration of the disease, and by diminishing the risks of complication. Rapidity is one of the essentials of all good anti-rheumatic medication. Add to this the fact that these preparations are not hard to take, and are *anodyne*, and we fulfil the three great recommendations,—*cito, tuto, et jucunde*." X.

PARENCHYMATOUS INJECTIONS.—A NEW MODE OF TREATMENT OF SYPHILITIC BUBO (Dr. Franz Jakubowitz, *Wiener Med. Presse*, Nos. 3 and 4, 1875).—In 1866, Dr. J. advocated the direct use of injections of the iodide of potassium, and claimed that good results were obtained from them in the treatment of inflamed and hypertrophied glandular tissue. Since that time he has extended their use, and has employed them in scirrhus of the breast, hyperplastic struma, scrofulous inflammation of glands, and in buboes of syphilitic origin.

His experience with injections of this salt confirmed the theoretical views which seem to make them applicable; and in syphilis they would appear to be especially indicated, since the remedy acts both locally by inducing resolution, and also upon the entire economy when once absorbed.

I. H. M., a priest, aged 26, in November, 1873, contracted an indurated syphilitic ulcer, which healed after a treatment of six weeks' duration; and on the 6th of January, 1874, the inguinal glands were found to be infiltrated and quite sensitive, and in four days there was a bubo of the size of a hen's egg upon the left side.

Owing to an unusually large number of deaths among the members of his flock, the patient was unable to rest, and the bubo rapidly got worse.

Various resolvents and cold applications were unavailingly used, and at last it was determined to employ parenchymatous injections of the iodide of potassium, with the hope that a speedy resolution might be obtained.

The tumor was at this time as large as a goose's egg, the skin upon and about it inflamed and sensitive, but no sense of fluctuation was experienced upon careful examination. On the 14th, the first injection was made, a solution of fifteen grains of the iodide and five drops of the tincture of iodine in one ounce of water being employed. The injection was made at the most prominent part of the swollen gland, the needle being introduced somewhat obliquely, so as to prevent the entrance of air and to assist in maintaining the fluid in the gland upon the withdrawal of the instrument. After about the fourth part of the contents of an ordinary hypodermic syringe had been injected, there was a feeling of resistance, and the needle was then partially withdrawn and again thrust forward, but in a somewhat different direction. This manœuvre was repeated several times, until the entire contents of the syringe had been injected. Neither blood nor pus escaped from the opening made by the syringe, but traces of pus were noticed on the needle. The patient suffered no pain from the introduction of the instrument, but during the injection complained of a painful increase of tension in the gland. After a short time the wound was dressed with carbolic adhesive plaster, and the patient ordered to spare himself as much as possible and to present himself the next day. In the evening of the same day he came, and stated that although he had been the whole day upon his feet he had felt no pain, and could move with much more freedom. The tumor, upon examination, was found to be harder, and the skin not so red, and less sensitive upon pressure.

On the 15th, a still further improvement was noted, and the injection was repeated in the same manner as before. Two more injections, at intervals of two days,

were made, so that altogether but one and a half grains of the iodide and half a grain of the tincture of iodine were administered. A constant improvement took place, and after eight days there was a tumor of the size of a large nut, which in another week entirely disappeared.

The second patient was a farmer, aged 23, who presented himself on the 6th of October, saying that he had had a bubo for five weeks, which, in spite of all the treatment that had been employed, neither suppurated nor gave any signs of resolution. This bubo was no longer painful, but the man's digestion was beginning to suffer, and he was restless and could not sleep, and had night-sweats. He had been infected with syphilis three months previously, and the primary lesion had speedily healed. Upon examination, a tumor was found in the left groin which consisted of two portions, each of which was as large as a pigeon's egg, the skin over it being livid and thickened, and not movable.

The same mode of treatment was commenced at once, and continued from day to day with progressive improvement, until the operation had been ten times repeated. It is true that this mode of treatment has been used in but few cases, and that a wider experience does not always give the same success as is at first obtained; but still Dr. J. thinks that he is justified in calling the attention of the profession to the striking successes which he obtained in these two cases. W. A.

THE PATHOLOGICAL ANATOMY OF THE INSANE (*Wiener Med. Presse*, No. 3, 1875).—Professor Meynert sustains the view of Baillarger, that certain conditions are found on the surface of the brains of patients with progressive paralysis and mental disturbance, especially a destruction of the superficial cerebral layers with a thickening of the membranes, which is looked upon as an evidence of a chronic diffuse encephalitis.

He also finds in the substance of the brains of those who have had typical progressive paralysis, with an acute exacerbation of the symptoms, the so-called serous softening of the brain-tissue. This was found, by the microscope, to be an active inflammatory process, and could not possibly be looked upon as a post-mortem change.

The results of such pathological investigations have strengthened him in the opinion which he expressed ten years ago, that the similarity in the changes in the ganglion-cells in the connective tissue, and in the vessels which are found in the brains of paralytics, with the changes in the oedematous zones about acute encephalitic deposits in the brains of others with cerebral disease, points to the previous existence of an affection related to encephalitis which has run its course in the brains of paralytics. He has found precisely the same conditions in the atrophied horn of Ammon of epileptics and in the brains of paralytics. He divides these changes into two series: the one an evidence of existing stasis, the second a proof of the solution of pre-existing stasis. By the discovery of the existence of stasis, the process which goes on in the brains of patients who suffer with progressive paralysis is proved to be of an inflammatory character. W. A.

A CASE OF ABDOMINAL TYPHUS WITH ICTERUS (Dr. M. Heilter: *Wiener Med. Presse*, No. 3, 1875).—The patient, a boy of 18, was admitted into the hospital on the 19th of September, 1874, with many of the usual symptoms of typhoid, having also the entire surface of the body, including the conjunctivæ, intensely jaundiced. Death occurred on the 21st, and at the autopsy the glands of the lower part of the ileum were found to be much swollen, and at some points near the ileo-cæcal valve brownish-yellow sloughs were met with. The liver was rather large and relaxed, its structure altered and icteric, and in the gall-bladder there was some brown bile. W. A.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

BILLS OF INTEREST TO THE PROFESSION.

THERE are at present before the Pennsylvania

Legislature three bills in which the profession is deeply interested, and all of which, we trust, will be acted upon favorably. The first of them is entitled "An Act to Regulate the Practice of Medicine, Surgery, and Obstetrics in the Commonwealth of Pennsylvania." It practically amounts to as follows. Any person who has been in practice in the State for ten years may continue to practise without let or hindrance, but no others shall do so unless provided with a diploma from a chartered institution which does not sell its diploma. Any practitioner not having a diploma shall have the right to apply to any of the medical schools of the Commonwealth for examination, and, if found worthy, shall be granted a certificate allowing him or her to practise. Any person who shall open a transient office, or who shall advertise such transient office or other place to persons seeking medical or surgical advice, shall satisfy the clerk of the quarter sessions that the provisions of the act have been complied with, and shall also take out a license for one year, paying therefor the sum of two hundred dollars into the county treasury. A fine not exceeding five hundred dollars, or imprisonment not exceeding one year, is the penalty imposed for violation of the enactment.

On the whole, we think this bill a very good one, although, of course, we should like to have seen it go further. Believing as we do that a diploma from the medical schools is no guarantee that its possessor is in any degree fitted for the practice of

medicine, we would have preferred a State Board of Examiners before whom every aspirant for practice should appear. As, however, this is a democratic community, we suppose interference with the power of the medical schools to grant the right to kill would not be tolerated, and, not being able to get the whole loaf, let us be thankful for the half of it. The bill will, if enacted and enforced, do away with two great evils,—practising without a diploma, and peripatetic quackery.

The second act has for its object the creation of a State Board of Health, to consist of five physicians, appointed by the Governor with the advice and consent of the Senate, together with the Attorney-General of the State and the Secretary of Internal Affairs. This board is to serve without salary, but their actual expenses when travelling, and the necessary clerical expenses, are to be paid by the State. The Secretary of the Board, who must be a physician, is to be elected by the Board, and is to receive a salary not exceeding three thousand dollars. The Board has also power to expend moneys in special sanitary investigations; but the whole expenses are not to exceed eight thousand dollars a year.

We have not space here to detail the various duties which are pointed out, but the proposed act seems to us an excellent one, and, so far as we can see, good in all its details.

The third professional bill before the Senate at Harrisburg is to "authorize the use of unclaimed bodies of convicts and others for the promotion of the medical sciences." It is quite long, and we have not space for its analysis, but it seems to us very fair and wise in its provisions.

THE WARREN PRIZE.—We would call attention to the advertisement of the Warren Triennial Prize. This was provided for in the will of the late J. Mason Warren, in honor of the memory of his father, John C. Warren. The trustees of the fund are those of the Massachusetts General Hospital, and a committee of the staff of the hospital constitutes the judges. No essays were presented for the prize of 1874, for which year the subject proposed was "The Elimination of Drugs by the Mammary Gland." No special subject is given for 1877, but competitors have the full latitude allowed by the will to choose any subject in physiology, surgery, or pathological anatomy, involving original researches. The only prize as yet taken found its way to this city; and we trust that hereafter the like result will be so common as to be looked upon as a matter of course.

LEADING ARTICLES.

THE USE OF COLD IN FEVER.

NO. IV.

IN concluding this series of brief articles upon the treatment of pyrexia by the abstraction of heat, it only remains to consider the various methods of attaining the desired end. These methods are divisible into two sets: those in which water is brought in direct contact with the person of the patient, and those in which the bodily temperature is reduced by the application of bags containing ice or water.

The first of these general plans is undoubtedly the most efficient, and has been the one generally employed. In selecting a special mode of application, it must be borne in mind that no good is achieved unless the temperature of the body is reduced and *kept down*. The clinical thermometer must always be the guide as to the efficiency of the application, and the latter must be renewed so soon as the fever-heat re-manifests itself. The *cold pack* is the least troublesome, and generally the least disagreeable, of all the methods of applying cold water. Unfortunately, it is not sufficiently powerful to act decidedly upon adults suffering from intense fever. I have seen it time and again fail to make the slightest impression. When it is employed, the bed should be covered with an india-rubber blanket or cloth, the sheet wrung out, not too dry, in water as near 32° F. as is convenient, and wrapped closely round the naked person of the patient. No other covering should be allowed; or, if demanded by modesty, it should consist simply of a sheet loosely thrown over the person. If the patient be enveloped in blankets, all anti-pyretic influence is lost, and the pack soon becomes really a warm sweat-bath. The continuance of the cold pack should vary *pro re nata* from five to ten minutes, at the end of which period the sheet is usually thoroughly warmed. Its power is greatly increased by sprinkling it every five minutes with ice-cold water from the spray-nozzle of an ordinary watering-pot; in this case the application may be continued for a long time, if necessary. The number of packs to be used in the twenty-four hours depends entirely upon the rapidity of rise in the bodily temperature: whenever the latter gets to 102° in the axilla, the sheet should be replaced. If the cold pack in any case is unable to reduce the temperature to 102° F., it should be set aside; indeed, as already intimated, it is not applicable to *adults* suffering from a high grade of fever; in *children* its effects are more pronounced.

The bath is used in various ways, but these may be practically considered as modifications of two, or at most three, different plans: that of the lukewarm bath, used as such, or in the modified form known as the method of Ziemssen, in which the bath is gradually cooled whilst the patient is in it; that of Brandt, in which very cold baths of short duration are given; and that of Currie, in which cold affusions are practised.

The use of lukewarm baths (85° F.) in fever has not

met with much favor. It would appear at first sight that a cool bath would simply require a longer time than a cold bath in order to reduce bodily temperature to the one point. The experiments of Liebermeister have shown, however, that the tepid bath is in no degree comparable to the cold bath in its effects on bodily heat. As illustrative of the inequalities of results obtained by different but apparently equivalent methods of abstracting heat, may be mentioned the fact, apparently proven by Liebermeister, that the influence of two short cold baths at a brief interval is much greater than that of one bath of like temperature whose duration is equal to that of the two short ones. It has also been found in practice that whenever in the adult the fever is high, tepid bathing has very little influence upon it. Such baths may, however, be employed in very feeble persons where the pyrexia is not very marked. Upon children the lukewarm bath is said to produce much more decided effects than it does upon adults.

The researches of Liebermeister indicate that the larger the patient is, the cooler must the bath be in order to influence the bodily temperature. In judging of the effect of a bath, it must never be forgotten that often the temperature continues to fall for some minutes, or even for hours, after removal from the bath. This is especially true in cases of acute pyrexia; under these circumstances serious results are said to have been produced by keeping patients in the bath too long, waiting for the temperature to reach the normal point.

Ziemssen modified the use of the tepid bath by gradually cooling it while the patient was in it by the addition of water at a low temperature. This is, of course, an efficient procedure, capable of producing any effect that can be obtained by the abstraction of heat. Caspari (*London Med. Record*, 1873, vol. i. p. 796) believes that in very feeble subjects the use of cold baths should be superseded by the method of Ziemssen. He places such patients in a hip-bath at a temperature of 80° F., and, whilst the upper part of the body is vigorously rubbed, pours over it water at 60° until the temperature of the bath is lowered to 62°, occupying about fifteen minutes in the procedure. On the other hand, Glénard calls attention to the fact that the long gradual bath is much more wearying and exhausting to the patient than the short decisive plunge, and affirms that in his experience it is no less disagreeable to the sick man. Further, the clinical results achieved by Liebermeister, Glénard, and others prove that adynamia, except of the gravest kind, is not a contra-indication to the use of the cold bath: so that it seems to me that the choice between the cold plunge and the gradual cooling is to be determined by the exigencies and circumstances of the individual cases; either may be employed with the one result, provided it is always carefully seen to that the measures used are severe enough, and are put into application with sufficient frequency to keep the axillary temperature below 102½° F.

The exact manner in which Brandt's method should be employed is briefly but sufficiently summarized in the following instructions to the nurses at the Croix

Rousse Hospital, Lyons. They represent the exact plan employed by Glénard, who, it will be remembered, contends that no typhoid-fever case will die if treated in this way from the beginning.

"The nurse will every three hours take the rectal temperature of the patient, and give him a bath at 20° C., of fifteen minutes' duration, night and day, until the thermometer placed in the rectum for five minutes does not register 38.5° C. The patient is taken to the bath, his night-dress removed, and he is plunged *up to the neck* in the water at 20° C., while the head is sprayed at 6°-8°, especially where there are cerebral symptoms. After the nervous symptoms have abated, the spray may be given at the same temperature as the bath. The affusion having lasted one or two minutes, the nurse rubs the limbs of the patient for three or four minutes; then he is left at rest. His breathing may become difficult, and his teeth may chatter, but he must remain in the bath for fifteen minutes. When he is about to be removed from the bath, the affusion is to be repeated. He should be kept at least fifteen minutes in the bath, even should the shivering set in from the commencement; and longer, should the shivering be late of appearing. He is then removed, his night-dress put on without drying him; a sheet is thrown over his feet; his mattress should be hard enough not to yield to the weight of his body, which should be covered by a sheet in summer (also by a light linen cover in winter). A little weak tepid soup is now administered, along with a mouthful of old wine, and he is left alone to rally from his shivering, which lasts fifteen to twenty minutes, sometimes for even an hour. Fluid nourishment should be given regularly, and always tepid. If the patient is very weak, a spoonful of old wine may be administered before the bath."

Cold affusions were practised very largely by Currie in various pyrexiae, with undoubtedly most beneficial effect. He used water at from 40° to 50° F.; from a bucketful to four or five gallons being poured over the naked patient as he sat in a bath-tub. This affusion was repeated as often as was necessary to keep down the bodily heat. Currie supposed that the chief good was owing to the shock of the cold dash, and others also have claimed that the douche exercises some obscure reflex influence upon the nervous system. This is possible; but it does not appear to have been proven that the shock of the cold dash is greater than that of the cold plunge, or, indeed, that in either case the shock is other than deleterious in fevers. As an anti-pyretic measure, the simple cold affusion seems to me to be more troublesome and more terrifying than cold bathing, and, according to the researches of Liebermeister, it is much less powerful.

In order to avoid the labor to the nurse and the uneasiness to the patient which are involved in the use of cold water, various contrivances have been suggested for the refrigeration of those suffering from fever. Wet compresses or large bags filled with ice are often employed in Germany as adjuvants to more energetic measures, in order to lessen the number of baths re-

quired. They should be kept constantly applied unless the thermometrical record indicate otherwise.

It has also been proposed to encircle the patient with india-rubber tubing through which cold water is kept circulating.

Leube (*Deutsches Archiv für Klin. Med.*, 1871) claims that he has obtained the best effects from the use of ice mattresses. The details of his method are as follows:

"Two parallelogrammatic water-tight bags of india-rubber cloth, the one measuring unfilled twenty-eight inches long and eighteen inches broad, the other twenty-four inches long and eighteen inches broad, are to be filled with a freezing-mixture, composed of ice and salt. In order to allow comfort to the patient, the ice should be reduced to a powder and passed through a sieve. After five or six pounds of this ice-powder have been put into each bag, one to one and a half pounds of salt are to be thrown into each, and the orifice closed. Two bandages are then laid transversely across the bed, and the ice-bags are placed on them in such a way that the shorter corresponds to the trunk, the longer to the legs of the patient, who is to be laid upon the ice-bags after they have been covered with a gum blanket and a linen sheet. By means of the bandages the man is then tied down, one band passing over him above the knees, the other above the navel, and covered over with bed-clothes. The patients are said rarely to complain of the cold, and may be allowed to remain upon the ice mattress from an hour to an hour and a half."

If this plan is really efficacious in reducing the temperature, it offers such obvious advantages over cold bathing that it must eventually largely supersede the latter.

H. C. W.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 15, 1875.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

I. PERITONEAL tuberculosis.

II. Contracted kidneys and hypertrophied heart.

III. Cirrhotic liver and congested stomach.

Dr. F. P. HENRY presented the specimens, and read the following histories:

"I. J. H., æt. 40, was admitted to the male medical ward of the Episcopal Hospital about August 1, 1874, for diarrhœa, and, after remaining for six or seven weeks, was discharged apparently cured. He was again admitted about three weeks ago, the diarrhœa having returned, and was first seen by me at that time.

"His symptoms on admission were—extreme emaciation, great feebleness, and profuse diarrhœa, averaging from twelve to fifteen watery stools in the twenty-four hours. There was no complaint of pain, and no cough. The abdomen was retracted, and slightly tender on pressure.

"A variety of remedies were used, without effect, to check the diarrhœa, which, before death, became an almost continuous watery discharge.

"The autopsy was made by Dr. Merrill, the resident physician, eighteen hours after death.

"The *right lung* was found to contain a number of miliary tubercles unevenly disseminated through its tissue, but could hardly be said to be *infiltrated* with these bodies. There was a cavity about the size of an egg at the apex, very superficially seated in the lung-tissue.

"The *left lung* was hepatized in the upper half of the superior lobe; a portion cut off sank in water. Tubercles were also found in small quantity in this consolidated portion and throughout the remainder of the lung.

"The *heart* was healthy.

"The *intestines* were covered with tubercles from the duodenum to a short distance below the ileo-cæcal valve.

"The *mesentery* also contained these bodies and numerous enlarged glands.

"A flattened tumor, several inches in circumference (about six), was found in the mesentery at or near its junction with the vertebræ. It is supposed to consist of a mass of tubercular mesenteric glands.

"The *mucous membrane of the intestine* was pale, but apparently healthy; there was no appearance of tubercle or ulceration in it.

"The *stomach, liver, kidneys, and spleen* were healthy.

"The urine was examined before death, and found free from albumen.

"I would like to ask the opinion of the Society as to the cause of diarrhœa in this and similar cases.

"In *this* case, it has occurred to me that the tumor found in the mesentery might have caused pressure sufficient to paralyze some of the sympathetic fibres supplying the small intestine, and thus have given rise to a state of congestion which relieved itself by a transudation of serum.

"If nerve-fibres should be found to be involved in this mass, support would be given to this theory.

"No traces of inflammation were found in the peritoneum.

"II. The specimens of *contracted kidneys and hypertrophied heart* were taken from a girl æt. 17, who was admitted to the Episcopal Hospital on the 7th of December.

"She presented the typical symptoms of chlorosis,—a greenish-yellow skin, pearly conjunctivæ, amenorrhœa, and a marked continuous musical murmur heard on applying the stethoscope over the course of the internal jugular vein. There was also a blowing murmur with the first sound of the heart, heard most distinctly at the apex.

"Under the use of iron and quinia the girl steadily improved up to December 16. At this time she became more feeble, lost her appetite, and complained of colicky pains in the abdomen. Her condition remained about the same until the evening of December 18, when she became partially comatose, and died at midnight.

"At the *autopsy*, ten hours after death, the *left ventricle* of the heart was found hypertrophied, and the *kidneys* contracted.

"The *lungs* were perfectly healthy, as were also all the abdominal organs except the kidneys.

"The cortical portion of the kidneys is atrophied, and the kidneys are quite small; but it must be borne in mind that the patient furnishing these specimens was a remarkably small individual, not five feet in height, and weighing, I should say, under one hundred pounds when in an ordinary state of health, so that the small size of the kidneys may be more apparent than real.

"This is believed to be a case of simple hypertrophy of the heart caused by contracted kidneys.

"III. The third set of specimens was removed from a woman æt. 53, who was admitted to the hospital on December 8, 1874. She first noticed a fullness of the abdomen in July last, which increased for three or four weeks and then disappeared under medical treatment.

Early in October the abdomen began to enlarge again, and continued to do so until she applied for admission.

"At that time there were all the signs of abdominal dropsy, which existed in so great a degree as to cause orthopnoea for the first two or three days after admission. There was also well-marked jaundice, and some œdema of the legs and feet. The abdominal distention was so great that the liver could not be felt, and this distention rendered it also impossible to determine accurately the vertical diameter of the liver. The bowels were moved three or four times daily without medicine.

"There was no albumen in the urine. As the patient refused to submit to tapping, elaterium in daily doses of one-tenth grain was given, but produced no increased action of the bowels; on the contrary, the bowels became rather more constipated.

"On the 18th, the skin on the back and legs ruptured; this was followed by a steady discharge of serum. The abdomen became softer, but the constipation became more obstinate, and about this date she was given one-tenth grain of elaterium hypodermically; this produced no effect, and was repeated on the 20th. The elaterium again produced no effect. On the 22d, there was slight discharge of fæces in response to an enema.

"The patient became gradually weaker, the jaundice more intense, and a mild, cheerful delirium supervened.

"For the last two days of her life she swallowed with difficulty, and was supported almost entirely by nutritive enemata.

"At the *autopsy*, six hours after death, the *abdomen* was found distended with yellowish serum; the *liver* hard, covered with nodules, and of a brownish-yellow color; weight, three and a half pounds.

"*Spleen* much enlarged and congested, its capsule thickened and opaque, but easily detached.

"*Kidneys* healthy; *heart* also healthy.

"Commencement of *aorta* atheromatous.

"*Lungs* hypostatically congested, otherwise healthy.

"The *stomach* contained a quantity of coagulated blood, which must have been poured out shortly before death, as no hæmatemesis had taken place. Mucous membrane of stomach reddened and swollen."

Dr. WHARTON SINKLER said that the patient from whom the first specimens were derived had been under his care during almost the whole of his term of service, which had immediately preceded that of Dr. Henry. His illness began with an attack of poisoning, apparently by the rhus toxicodendron, and he stated that he had been in perfect health up to that time. Immediately after this, diarrhœa came on.

When admitted to the hospital, about four weeks later, his arms, hands, and face were covered with eczema, and there was a profuse and obstinate diarrhœa. The diarrhœa was finally checked, and there were no lung-symptoms; but during convalescence there appeared to be some loss of power in the lower extremities, and, if Dr. S. remembered rightly, some disordered sensation.

He desired to know whether the spinal cord had been examined, and whether there remained any traces of the skin-affection.

Dr. HENRY replied that the cord had not been examined, and said that while the patient was under his observation there was no loss of power in the limbs except such as could be attributed to wasting and weakness.

Epithelial cancer of rectum.

Dr. LEONARDO S. CLARK presented the specimen, for Dr. ABRAHAM S. GERHARD. Mrs. Christine S., æt. 52 years; a widow for four years; housekeeper; native of Würtemberg, Germany; had borne four children; no miscarriages; no previous disease of consequence; past the climacteric six years; no carcinoma in family from grandparents down, so far as known; suffered

from lateral curvature of the spine (to the right) from childhood, the cause of which is not known; she has children aged respectively thirty-two, thirty, twenty-four, and sixteen years, all healthy; husband died of general carcinomatous degeneration of lungs, pancreas, and mesenteric glands.

Mrs. S. was of phlegmatic temperament, had blue eyes, light-brown hair, and a gentle disposition. The peculiar cachectic appearance was well marked.

Nine years ago she first noticed a lancinating pain in the rectum. She never mentioned it for a period of nearly seven years, although she suffered greatly at times. Two years ago she complained to one of her daughters that "her womb was forced down." The fact was communicated to her physician, but, on account of her great diffidence, no personal examination was made until about one year ago, when it was found, upon both vaginal and rectal examination, that the womb was retroverted and prolapsed, and that this displacement of the organ was caused by a large tumor of the rectum above it, which tumor was to the touch hard, nodulated, and cartilaginous. *Cancer of the rectum* was immediately suspected, and the diagnosis was subsequently confirmed by Drs. Goodman and Merklein.

The symptoms from that time until death were those of sharp, lancinating pain through the pelvis, great difficulty in defecation, accompanied with excessive tormina and tenesmus, partial protrusion of the uterus and posterior portion of bladder, with general failing of strength. On New-Year's day she paid a visit to her physician, although in great pain and distress, and on the morning of the 2d of January she died with symptoms of obstruction of the bowels, although there was no stercoraceous vomiting.

The *post-mortem* examination was made by Dr. L. S. Clark, twelve hours after death.

Rigor mortis was well marked; the body was emaciated, and the belly enormously distended with gas; its integument was partially decomposed.

Upon dissection, the peritoneum was found to be universally injected, and there were a few pelvic adhesions. The small and large intestines were greatly distended with gas and fecal matter, which had to be evacuated before the pelvic organs could be removed.

Upon removal of the latter, the uterus and bladder protruding through the vulva, a hard, cartilaginous, nodulated mass was found occupying the rectal walls for a distance of about six inches in length and two and a half inches or more in diameter, starting from within three inches above the sphincter ani. To this was adherent a portion of the small intestine. All the other pelvic and abdominal organs appeared to be normal, except that there was some erosion of the os uteri.

A longitudinal section of the diseased part showed the canal to be pervious, the mucous membrane near the centre of the diseased mass to be ulcerated and of a dark congested appearance. The knife, in passing through the morbid tissue, grated, and the part felt dense. The cut surface was white and streaked.

The PRESIDENT inquired of the surgeons present whether the submucous form of cancer of the rectum, of which this appeared to be an example, was more frequent in their experience than that attended by out-growths from the mucous membrane encroaching upon the lumen of the canal. His own experience furnished more of the latter variety than of the former.

Dr. JOHN ASHHURST, JR., said that no doubt, in the majority of cases, the growths ultimately involved the mucous membrane and projected into the bowel, but in the early stages the mucous membrane might not be involved. In the case just reported, he thought that the fatal result was due not so much to the existence of cancer as to the presence of some independent source

of obstruction (such as a volvulus), as shown by the fact that after death the bowel was found pervious. Probably had this patient lived longer, and the disease thus been allowed to run its course, the mucous membrane would have become implicated, and the growth would have protruded into the gut, perhaps itself eventually producing fatal obstruction.

Dr. R. M. BERTOLET was inclined to agree with Dr. Pepper that cancer of the rectum most frequently manifested itself in a protrusion of the mucous membrane towards the lumen of the tube. Indeed, Billroth has pointed out that the rectum is the favorite seat of that form of epithelial growth known as adenoma, which, beginning as a hypertrophy of the follicles of the mucous membrane, involves the outer portions of the bowel secondarily.

The PRESIDENT said he had been impressed with the difference in the appearances produced by cancerous infiltration of the submucous tissue in different parts of the alimentary tract. Thus, at the pyloric orifice the disease very often goes on to extreme obstruction without ulceration, and especially without formation of growths projecting from the mucous surface. In cases of cancer of the rectum, even in its early stages, on the other hand, it had seemed that there was much more frequently, in addition to submucous thickening, more or less of such free growth.

Dr. PEPPER desired also to know whether it did not coincide with the experience of the members where death has ensued during organic disease of the bowel to find at the autopsy a greater degree of apparent perviousness than was anticipated before death, when, indeed, the bowel might seem to be almost completely obstructed.

Dr. ASHHURST said that the remarks of the President were no doubt correct. As he (Dr. A.) had already remarked, he did not doubt that in this instance the fatal obstruction was due to a twisting of the bowel or to some similar cause, and that the patient therefore actually died from intestinal obstruction, and not from cancer.

The specimen was referred to the Committee on Morbid Growths, which reported, February 11, 1875, as follows:

"The rectal tumor presented by Dr. Clark is an epithelial carcinoma.

"The peripheral portions of the growth show not only a regular cylindrical arrangement of the epithelial elements, but also a distinct limiting membrane or tunica propria. In the more central portions of the tumor the arrangement is less suggestive of a glandular structure; the tunica is absent, and the connective-tissue stroma is more richly developed, but not to such an extent as to warrant the designation of scirrhus."

(To be continued.)

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF TRAUMATIC ANEURISM (*The Lancet*, December 12, 1874).—Mr. Bryant gives three cases of aneurisms which were the results of wounds of healthy vessels, and were situated on parts easily accessible. In these respects they differ greatly from aneurisms due to disease or degeneration of the arterial walls, and from aneurisms deeply situated or springing from the great vessels in or near the trunk. For these the treatment by incision has not received the sanction or approval of the majority of English surgeons. But for those following wounds, treatment by incision into the sac, and the application of a ligature or of torsion to both ends of the artery, is constantly practised, and has been

attended by marked success. This difference is easily accounted for. In traumatic aneurisms the artery is, in the majority of instances, otherwise healthy, is readily closed, and speedily repairs; but the case is different where the aneurism springs from a diseased vessel, for then the condition of the artery will not usually permit the application of a ligature or of torsion, or the vessel will not take on proper reparative action, so that secondary hemorrhage is liable to occur in a shorter or a longer time.

The chief difficulty in treating an aneurism by incision and by closing both ends of the divided vessel is, of course, the severity of the hemorrhage during the operation. But this difficulty may, as a rule, be easily overcome by pressure on the main trunk, or by pressure on the open mouths of the vessels in the sac. In cases of more than ordinary difficulty, the Esmarch bandage may be applied with great advantage where the aneurism is situated in the extremities. By this means the limb may be thoroughly exsanguinated, and the operation rendered as facile as in the cadaver.

NÉLATON'S METHOD IN CHLOROFORM-NARCOSIS (*The American Practitioner*, February, 1875).—Dr. M. H. Jordan reports the case of a girl, æt. 18, to whom chloroform was administered preparatory to the extraction of a tooth. After four or five inhalations, some spasmodic movements were observed, the pulse became excessively small and feeble, and, together with the respiration, soon ceased to be perceptible. The entire muscular system was completely relaxed, and the lips, face, and hands grew livid. The patient's body was immediately inverted, the jaws were pried open, and efforts at artificial respiration were made by alternately pressing in the thorax and abdomen. After about five minutes had elapsed, there was a feeble attempt at respiration, followed after a long interval by others, and a gradual return of the pulse, until it was deemed safe to place her on a bed. As soon as she was put in the horizontal position, however, the breathing again ceased and the pulse disappeared. She was again instantly placed with her head downwards, and artificial respiration was renewed. After a prolonged interval, the breathing was re-established, and the pulse again returned. There was no further trouble, except an inclination to stupor, which was counteracted by stimulating applications to the spine, and hot foot-baths.

NEURALGIA OF THE LARYNX (*The Medical Press and Circular*, January 20, 1875).—Dr. Clinton Wagner has found that neuralgia of the larynx is occasionally met with as a true neurosis, and independent of any other morbid process in the same individual.

The pain, which is at times intense and agonizing in its character, is felt along the thyroid cartilage and anterior part of the neck, the nerves implicated being the superior and inferior laryngeal, especially the former.

There is also at times a feeling of oppression or choking; the voice is weakened, and the pain increased when the least exertion of it is made.

The treatment he has found most successful has been large doses of tinct. iron and quinine, and insufflations of tannic acid and morphia into the larynx. Aconite liniment over the seat of pain gives temporary relief. Counter-irritation from blisters or tinct. iodine have been recommended. Hypodermic injections of morphia are also useful. Electricity in the form of the faradic current, in the few cases he has employed it, has had the effect of increasing the pain from the muscular excitation it produces, and the constant current in his hands has failed to give the relief claimed for it by others who have used it.

BLEEDING FUNGOUS GROWTH FROM THE URETHRA (*The Lancet*, December 12, 1874).—Mr. Hutchinson

reports the following case: A woman, aged thirty-three, had suffered for five or six years from a bleeding growth of the urethra. The bleeding first came on about five years ago, after severe muscular exertion. The patient had been in several hospitals, without gaining any permanent relief. Four years ago the growth was removed by the knife and the cautery, but returned. Since then she has been subject to severe hemorrhages from the part. The actual cautery was recently applied, with some relief from the bleedings for a few days.

The interest of this case lies in the fact that there is a family history of the hemorrhagic diathesis, and also of recurrent (malignant?) growths. The mother's sister had a "bleeding cancer of the lip," which was removed, but re-formed on the tongue. One sister is subject to severe epistaxis, and the patient's son has been affected with epistaxis for three years. Another child died at the age of six years with bleeding from the nose and mouth. A sister of the patient has severe floodings after parturition, and has also a large red tumor of the left upper eyelid, which has been removed twice.

MISCELLANY.

GARIBALDI AS A SANITARY REFORMER.—Few meetings of modern times have been more interesting than that of King Victor Emanuel and General Garibaldi. It was a fitting epilogue to the glorious drama of Italian unity. But the subject of their conversation was not less noteworthy. It was the sanitary improvement of Rome by the cultivation of the Campagna and the embankment of the Tiber. This is an old project of Garibaldi's, which he has kept in the background till the flag of united Italy floated from the Capitol. The cry of "Roma o morte!" he has now exchanged for that of "Roma e vita!" and with characteristic foresight and fervor he has seen and determined the two points to be attacked, and the king listened to them and promised his hearty co-operation. For effecting this sanitary revolution Garibaldi proposes the employment of relays of the Italian army and of the laboring classes of the Roman province in the prosecution of the works on the Campagna and the Tiber; and the idea, fairly considered, is by no means a Utopian one. Who but the legionaries under the old republic constructed the roads and the walls whose convenience and strength have been the admiration of modern times? And what better occupation could be found for Italy's overgrown army than the employment of detachments of it in breaking up the waste land of the Agro Romano and preparing it for its old agricultural uses? The embankment of the Tiber and the regulation of its course is a similar task not less appropriate for the *cives Romani* of these days, whose aspiration it should be to make Rome the centre of more masculine interests than those of the *dilettante* and migratory foreigner. Money—the weak point of all Italian undertakings—must, of course, be provided; and abler financiers than the present purse-bearers of Italy must arise before the sanitary improvement of Rome can be satisfactorily begun.—*London Lancet*.

A CORRESPONDENT writes to us as follows: "Why is it that medical schools are so far behind the times? Why are medical degrees given away so freely? The value of a thing is generally estimated by the time and labor required to obtain it: if this be the case, an M.D. is not worth as much and is not so respectable as a horse-doctor's degree (D.V.S.). To obtain the former, one has to spend a year at a medical school and make the faculty believe that he has opened a medical book once in a while during the last three years; to get the latter, one has to study six years at a good school. Still we think ourselves better than horse-doctors. The medical schools think too much of patronage. It seems as if their object is rather to make money than to increase the value of the degree. A degree of M.D. should be made as honorable as that of Ph.D. or of Sc.D. Why should not students be obliged to pass a preliminary examination?"—*Boston Medical and Surgical Journal*.

A LEDGER and set of day-books for the use of physicians has just been published by Mr. U. L. Hitchcock, of New York, on a new and very simple plan. The day-book is in twelve sections, one for each month, each one so small as to be easily carried as an ordinary pocket-book. The account of each patient is kept on two horizontal lines, one for charges and the other for credits. The totals for the month, which can be seen almost at a glance, are to be transferred monthly to a ledger of four hundred pages, in which each patient's account is extended on two lines, similar to those of the day-book, to the end of the year. The work of posting is thus rendered exceedingly simple and rapid.

WE desire to call attention to the "Case Record Book." There are two books, one for the office and the other for the pocket. The latter is really a visiting-list, formula-writer, prescription-blanks, and a tag upon which a copy of the prescription given, and any notes of the case, may be recorded. To all in large practice these books must prove a great convenience.

THE motto over the main entrance to the hospital at Vienna is "Saluti et solatio ægrorum," and that over the Anatomical and Pathological Institute is "Indican-dis sedibus et causis morborum." On these two principles the science of medicine may truly be said to be built.—*London Lancet*.

FROM the Report of the Peking Hospital for 1873, by Dr. John Dudgeon, we learn that the aged, infirm, and debilitated generally are recommended by Chinese physicians to drink urine to restore health!—*Medical Times and Gazette*.

ACCORDING to the *Wiener Medizinische Presse* for January 3, the first dental school has just been announced in Vienna. The course of lectures and practice lasts six months, the school being open from 8 A.M. to 5 P.M.

AN ice-inspector has been appointed in London, whose duty is to examine and certify to the safety of the ice in the public parks.—*Boston Medical and Surgical Journal*.

NOTES AND QUERIES.

MEDICAL OFFICERS OF THE BRITISH NAVY.

THE following Order in Council has been issued:

"At the Court at Osborne House, Isle of Wight, the 4th day of February, 1875.

"Present—The Queen's Most Excellent Majesty in Council.

"Whereas, There was this day read at the Board a memorial from the Right Honorable the Lords Commissioners of the Admiralty, dated the 1st of February, 1875, in the words following:

"Whereas, We have had under our consideration the position of the Medical Officers of your Majesty's Navy; and, whereas, we are of opinion that it will be for the benefit of your Majesty's service that the following regulations shall be established, we beg to submit them most humbly for your Majesty's approval:

"1. That Surgeons on entry shall have the same relative rank as Paymasters, Chief Engineers, and Naval Instructors,—namely, shall rank with Lieutenants under eight years' seniority, and shall have uniform corresponding to such relative rank.

"2. That Staff-Surgeons shall be denominated "Fleet-Surgeons," and Medical-Surgeons second-class simply "Staff-Surgeons;" the distinction in rank between these two grades to be denoted by a small difference in the uniform.

"3. That Inspectors-General shall be compulsorily retired at the age of 60, on £2 per day, provided they shall have completed the period of service now required to entitle them to the *maximum* half-pay of their rank.

"4. That Deputy Inspectors-General shall be compulsorily retired at 60, if in the first six of their rank, at 33s. per day, others at 30s. per diem, provided that they shall have completed the period of service now required to entitle them to the *maximum* half-pay of their rank.

"5. That Fleet-Surgeons and Staff-Surgeons shall be placed on the same scale of retirement as Chaplains and Naval Instructors, Secretaries, and Paymasters; that is, the *maximum* to be £450 per year instead of £400.

"6. That any Fleet-Surgeon shall have the option of retiring after twenty years' full-pay service in all ranks at 15s. per day, and after twenty-five years' service at 21s., subject in each case to our approval; but that of those now on the list, not more than ten shall retire under this clause in each year (the officers having the option according to seniority), unless we should approve (with the consent of the Lords Commissioners of your Majesty's Treasury) of a larger number so retiring.

"7. That of the medical officers to be hereafter entered, all shall have the option of so retiring, subject to our approval in each case; and we beg leave to represent to your Majesty that the Lords Commissioners of your Majesty's Treasury have signified their concurrence in the proposed arrangements."

"Her Majesty having taken the said memorial into consideration was pleased, by and with the advice of Her Privy Council, to approve of what is therein proposed. And the Right Honorable the Lords Commissioners of the Admiralty are to give the necessary directions herein accordingly.

"ARTHUR HELPS."

—*London Times*, February 6, 1875.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held at the hall of the College of Physicians, Wednesday, March 10, at 8 o'clock P.M.

Dr. James Tyson will read a paper; subject, "The Treatment of Bright's Disease of the Kidney."

The medical profession in the city are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 23, 1875, TO MARCH 1, 1875, INCLUSIVE.

SMITH, A. K. SURGEON.—Relieved from duty in the District of New Mexico, and assigned to duty at Fort Hays, Kansas. S. O. 21, Department of the Missouri, February 18, 1875.

WHITE, R. H., ASSISTANT-SURGEON.—Granted leave of absence for two months, with permission to apply for an extension of six months. S. O. 41, Military Division of the Atlantic, February 26, 1875.

YEOMANS, A. A., ASSISTANT-SURGEON.—At the expiration of his present leave of absence, to report in person to the commanding officer, Newport Barracks, Kentucky, for duty. S. O. 31, A. G. O., February 23, 1875.

ADAIR, G. W., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Yeomans, to report in person to the Commanding General, Department of Texas, for assignment to duty. S. O. 31, c. 5., A. G. O.

SATURDAY, MARCH 13, 1875.

ORIGINAL COMMUNICATIONS.

ON THE USE OF IODIDE OF POTASSIUM IN SYPHILIS.

BY JOSEPH R. BECK, M.D.,

Fort Wayne, Ind.

AT the meeting of the Indiana State Medical Society for 1874, I was appointed to read a paper on the iodide of potassium, in 1875.

This article will comprise extracts from the said paper only in so far as they are pertinent to the subject above stated, will be very practical, and make not the least pretension to scientific research. It has been hastily thrown together by reason of what I deem to be fallacious teaching, as found in a paper in the *American Journal of the Medical Sciences* for January, on "The Use of Mercury in the Late Stages of Syphilis," by Dr. Fred. R. Sturgis, of New York.

I decline any scientific controversy in the matter at present, because my data, although very numerous, are not yet sufficient "to establish the theory convincingly" by the only way in which this can be done,—namely, the production of overwhelming statistical statements. However, I am pleased to be able to give Dr. Sturgis (and other mercurialists) some food for contemplation in the two cases which I shall hereinafter instance, and hope that he will agree with me that these cases were in the highest degree desperate and typical ones, and will, after a perusal of them, give some credit to the "anti-mercurialists."

Of course, no one will expect all the points of argument to be covered in a paper of this description. I intend to make an exhaustive review of the matter at a future day, when I shall contribute a large number of the very worst cases of syphilis; but for the present this small paper must answer.

I do not now use, nor have I for a long time past made use of, mercurials in the treatment of syphilis. The fact is, I am entirely satisfied that in the treatment of any phase of syphilitic disease mercurials do harm. This sweeping denunciation of so ancient a remedy in this disease as mercury makes it well for me to state that I *do* use mercurials in *some* diseases, although *never* in syphilis.

But why do I not employ mercury in the treatment of syphilis, particularly since it has proved efficacious in the hands of so many in causing the symptoms of that disease to disappear very quickly indeed? Well, I reply, that very fact constitutes my reason. It *does* act quickly, entirely too rapidly to be in the least degree reliable, in my estimation. We are well aware of the fact that under the use of mercurials secondary manifestations may be rapidly dissipated, and we have been enabled, owing to this fact, to discharge our patients in a few weeks without spot or blemish. But, alas for this treatment! we have in *every case* only succeeded in *masking* the disease, and, after

another suitably long period of fermentation, we will surely have to deal with its tertiary manifestations. I use very emphatic language here, and words which it is impossible to mistake the purport of; but I close this item by the still stronger assertion, *that every case of secondary syphilis which has been successfully (?) treated by mercurials will, as surely as the sun rises, reappear as tertiary syphilis, if the patient lives long enough.* I feel warranted also in saying in this connection that many a case of mercurially-cured secondary syphilis passes from beneath our unskilful hands to the grave, labelled in the mortuary list as a victim to some intercurrent disease, when, if the facts could be known, the said intercurrent disease would show itself to be simply and truly an obscure invasion of tertiary syphilis. I have known such cases to occur in the practice of some of my medical friends. Syphilis, either secondary or tertiary, cannot be treated to a *permanent* cure in a few weeks or a few months. A radical, permanent cure requires fully a year of careful treatment, and often more; and I feel very well satisfied if I can dismiss a tertiary patient from treatment without a mark in eighteen months.

"Authorities" on the subject say that the iodide of potassium is the remedy *par excellence*, in the tertiary forms of the disease, but that it is not so good as mercury, or a combination of the two, in the secondary. Now, my readers, if I have told the truth heretofore, then all such statements as this last are unqualifiedly false. I refer you for proof of my assertion to your own mercurialized cases. Have you or not had the tertiary symptoms to treat after you had cured the secondary by the use of mercurials? You will, of course, reply in the affirmative. Then, did you ever see or hear of a case which in its secondary form had been treated to a cure by the iodide of potassium alone recur as tertiary? I presume that, if your experience has been similar to mine (and I know of some cases which date cures back to 1860), your reply this time will be decidedly a negative one.

What does this demonstrate? Simply that the iodide of potassium *cures* syphilis, and that mercury only *masks its symptoms*. I have over and over again, in parties living in four different States, and in situations where sanitary surroundings exerted not the slightest general influence, seen the very worst cases of tertiary follow upon supposed mercurial cures of secondary syphilis.

I shall now draw these remarks to a conclusion; and, after again advising you against the use of mercury in *any* stage of syphilis, I pass at once to the relation of the history of two cases, selected from a large number, because they are, to a great extent, typical illustrations of the facts which I have just set forth.

Case I.—In November, 1871, I was invited by D. A., resident in this city, and, at the time, the patient of another practitioner of the same place, to visit him. I did so, and found him in a horrible condition. After a short conversation, he requested me to take charge of his case. To this request I acceded, stipulating only that he should at once discharge his former medical adviser, owing to the fact that, although a professed

regular, I would not consult with him. This he at once did, and I took the case, promising him at the time a perfect and permanent cure. He was at the time confined to bed, being very anæmic and exceedingly weak. He had been steadily mercurialized by his adviser during a period of nearly three years, and what tissual destruction the disease had not wrought was most ably supplemented by the ill-advised remedy. Almost the whole of the right buttock had been destroyed by ulceration, and the whole of the muscular portion of the left arm from the elbow to the axilla and acromion process, with a very slight exception, had disappeared in the same way. There existed three gummatous tumors on the skull, and this was the extent of the damage. A more unpromising case could not well be imagined, especially as the patient was a man of notoriously bad habits.

I treated him in the manner I shall hereafter relate, from November, 1871, until February 1, 1873, a period of fifteen months, and he is now almost as perfect physically as he was prior to the contraction of his disease. This case had its origin in what certain self so-called leaders in syphilography are pleased to denominate a "chancroid." Excepting the annoyance attendant upon a very profuse pytalism, occasioned by the mercury yet remaining in the economy, the case began at once to improve, and, although the habits of the patient have not been such as I desired in every respect, yet the progress to a cure was very rapid, and pushed along without the least hindrance. *This was a perfect, not a speedy, cure.*

Case II.—On the 1st of August, 1874, A. K. R. came from middle Ohio, at the instance of a mutual friend, to consult me in reference to his case. It was one of tertiary syphilis, and its history began as far back as 1851. In the spring of that year he contracted a soft sore (some persons persist in calling them chancroids), which, after steadily progressing for about three weeks, finally healed under treatment. In 1853 he was attacked by all the usual secondary symptoms of the disease, which, however, gave way in about two months under the exhibition of mercury, and his medical adviser pronounced him cured. In August, 1857, he experienced a return of the malady, but this time in its tertiary form; and from that time until I took charge of the case, covering a period of seventeen years, he was never for one moment free from the tortures incident to the disease.

When I examined him, after entirely stripping him, I found him totally bald, with eleven gummata on his skull, and numbers of such tumors on other parts of the body; indeed, there was not a superficial bone in his body but what presented more or less of these tumors in all stages. Even the scapulæ were so affected. Besides all this, the whole palmar surface of the left hand presented one open ulcer, and another large destructive ulceration was located on his right hip. In addition to all these *minor* matters, the patient presented very apparent symptoms of commencing paralysis of the lower extremities, all signs of which disappeared early in the treatment. He was always a man of good habits, but since the last invasion of the disease he has had such an excruciating head-pain all the time that he resorted to the use of opiates for relief, and became a confirmed opium-taker.

I promised this patient a *certain* though not a *speedy* cure. He has had my usual treatment for six months now, and is almost entirely well, but I shall continue to treat the case for another six months, in the manner hereinafter indicated, unless in the interval iodism is to

some extent induced, in which event he shall be *perfectly and permanently cured*.

In treating syphilis, after examination, I prescribe the following: Iodide of potassium, 7 drachms; ammonio-citrate of iron, 4 drachms; distilled water, 2 fluidounces; syrup of orange-peel, *peppermint-water, of each 3 fluidounces. Make into a solution, and give a tablespoonful before each meal. Also, Fowler's solution of arsenic, 3 fluidrachms; simple syrup, orange-flower water, of each, 4 fluidounces. Make a solution, and give a teaspoonful after each meal. If some anæmia be present, which is frequently the case, especially if the patients have been mercurialized, I order, in addition to the above, Sulphate of quinia, 1 drachm; reduced iron (Quevenne's), 2 drachms; extract of gentian, sufficient. Make a mass, divide into sixty pills, and give one every three hours. Also, the following: Cod-liver oil, 7 fluidounces; fluid extract of valerian, 1 fluidounce. Shake the bottle, and give a tablespoonful every three hours. If, in addition to the ordinary constitutional disturbances, I have to deal with extensive ulcerations, I order hydrate of chloral, 1 ounce; distilled water, 2 fluidounces. Mix, and brush over the ulcerations thoroughly three or four times daily. If the ulcerations are situated upon dependent portions of the body, I support them by adhesive straps, which should be frequently changed. Any other symptoms which may require urgent attention should be met "*secundum artem*."

Now, the foregoing constitute my *first* prescriptions only. In each of the succeeding prescriptions there should be added successively one drachm of the iodide of potassium to its formula, and half a drop to the *dose* of the Fowler's solution in the arsenical formula. The iodide should then be carried up drachm after drachm in strength with each successive prescription, until we reach twenty or twenty-five drachms' strength to the formula, *or as much more as is necessary*, taking care to order the increase made only with each succeeding fresh prescription. The strength of the arsenical solution is to be carried up *seriatim*, as stated, until a dose of five drops of the Fowler's solution is reached, at which point I hold the patient until slight symptoms of the constitutional poisonous action of the drug are developed. The arsenic is then finally omitted as an adjuvant. The iodide, however, I carry up, in ever-increasing quantity, until symptoms of decided iodism are induced, when its administration is ordered stopped for a week; then it is again commenced, and if the iodism again shortly ensues, I can most confidently discharge my patient, perfectly and permanently cured, with the poison of syphilis, and, let me add, that of mercury, forever eradicated from the system.

In order to test the truth of the latter assertion, I have been accustomed to test every patient, in about a year after all treatment had ceased, with ten-grain doses of the iodide of potassium; and the test has invariably produced profuse iodism before one drachm of the drug has been consumed in these small doses.

My experience with the iodide of sodium salt has been, if not entirely disastrous, at least entirely negative in results, and for this reason I do not use it.

I close this rapid and imperfect sketch of my subject by a short abstract of a paper defining the action of the iodide of potassium upon the blood. This abstract concerning the reactions of the iodide when administered medicinally is of a paper on that subject by Professor Kammerer, from *Virchow's Archives*, 1874, and "Memorabilien," xix. 4.

In the stomach the iodide either undergoes no change, the elements of the ordinary articles of food being incapable of decomposing it, or else, by means of the chlorine, hydriodic acid is formed, by which, however, the ultimate reactions are not modified. Entering the circulation in an exceedingly dilute state, the iodide is at once decomposed, by the superabundant carbonic acid, into free iodine and the carbonate of potassa. Now, the iodine will have the greatest affinity for those substances in the blood with which it makes the most complex combinations, this affinity being most intense at the moment of the iodine becoming free. Therefore, of these substances in the blood, those first acted upon would be the "miasmatic matters and ferments;" next to these the fibrinous, and then the albuminous substances; and last of all, the fats. The iodine acts upon these substances by virtue of its disposition to take the place of their component hydrogen. It, however, does not form permanent compounds with them, but, having broken up their chemical union, facilitates their oxidation in the oxygen of the blood. The free hydrogen combines with an equivalent of iodine, forming hydriodic acid, which is in turn attacked by the oxygen, iodine is again eliminated, and so the process is continued.

On the other hand, the other component of the iodide of potassium undergoes changes which supplement the action of the iodine. As the compound is decomposed, the potassa is changed into the hyperoxide of potassium, the only oxygen compound upon which the iodine does not act. Here we have, besides the iodine, a powerful decomposing agent, which, by its strong oxidizing effect upon organic substances, assists in the consumption of the blood-elements. The hyperoxide is reduced to potassium, which again combines with carbonic acid, and carbonate of potassa is produced as at first.

Hence the action of the iodide of potassium depends upon the decomposing effect of free iodine upon the substances contained in the blood, and their oxidation and consumption by the hyperoxide of potassium, a result, the writer observes, which is confirmed by clinical experience.

I have extracted this abstract from the *New York Medical Record* of October 1, 1874.

Finally, I firmly believe that in the iodide of potassium, used in the manner indicated above, we have a specific antidote to syphilis, either secondary or tertiary, and am sure that you will all be surprised at the rapid good effect produced by the drug in these large doses. Do not forget, however, that small and moderate doses are literally thrown away, and that only very large amounts are productive of permanent good.

15 EAST WASHINGTON STREET.

TWELVE hundred and ninety-three volumes, most of them of European origin, were added to the library of the College of Physicians of Philadelphia last year.

A CASE OF PURPURA HÆMORRHAGICA REQUIRING TRANSFUSION.

BY J. M. BOISNOT, M.D.

DURING the night of June 4, 1874, I was called to see M. H., æt. 7 years; he had been for some time previous subject to troublesome epistaxis, etc. Both of the child's parents are in good health as well as circumstances, so that the child had had excellent hygienic care. There are four children, the patient being the third in the order of birth, and, with him excepted, all are in good health. There was at the time of my visit an intense general pallor, extending to the lips and internal surface of the eyelids, giving the patient a waxy appearance, and making more apparent the existing ecchymotic spots; these last were situated behind the ears, at the angle of the mouth, the roof of the mouth, and a large one, of six inches in diameter, over the region of the liver. Blood was noticed oozing from the nose, gums, and pharynx, while the quantity vomited led me to infer that there might also be internal bleeding. The pulse was feeble, quick and rapid; the respiration labored, the tongue pale, moist, and clean. The general expression of the face was anxious to a degree which might even call for the term frightened. The hemorrhage at this time was from the nose, and was sufficient to require applications for relief to both anterior and posterior nares.

As before stated, the history of the patient was that of a previously healthy boy, descended from healthy parents, in every way active and well. There being no obvious cause for the attack, I am disposed to attribute its origin to some interference with normal nerve-action, due to the shock from a fall from the second-story window upon the brick pavement years before, although no severe external injury could be perceived at the time. This may seem like going a great way in order to find a cause, but I am quite confident that I at one time removed the tibia for necrosis, which had its origin in fully as distant nervous shock, and from my experience in military surgery I think that the nervous shock accompanying and resulting from wounds and exposure eventuated in typhoid conditions, typhoid pneumonia, and phthisis many years after what was denominated complete recovery from the primitive conditions.

The treatment was, of course, first directed towards arresting the active epistaxis, by means of Monsel's salt applied to both the anterior and posterior nares by insufflation, which I employed successfully during the recent epidemic of smallpox in this city, in cases which I at first looked upon as requiring plugging of the nostrils by Bellocq's canula.

Internally, the administration of potass. chlorat., in combination with tr. ferri chloridi, was persisted in, while every attention was given to providing the most concentrated food. Rest was enjoined, with proper regulation of carriage-riding in the Park during the cool of morning and evening, so as to give as much pure air with as little excessive heat as was possible.

There could be noticed scarcely any improvement, and there were frequent returns of epistaxis, while the persistence of the ecchymotic spots was remarkable. The application of alcohol with brisk rubbing was maintained daily to the spine, and quinine, iron, and strychnia, together with stimuli in food-combinations, were freely administered. During the second week, at the suggestion of Dr. Keichline, of this city, the ol. terebinth., gtt. x-xv ter die, was given in sweetened ice-water. At the beginning of the third week there was improvement to the extent of an interval of four days without epistaxis, and, as the weather was oppressively hot, the patient was sent to Atlantic City. He stood the journey well, but in the night bleeding

recurred to the extent of alarming prostration; local and constitutional remedies were applied, and, on account of the stomach refusing food from the amount of blood swallowed, he was stimulated as much as he would bear. In the afternoon he was brought back to the city. The bleeding having been so excessive, and the consequent prostration so marked, I told the family, after a consultation with Dr. W. W. Turner, that the child could not live except transfusion was practised. I was the more fully impressed with this as a necessity from having been invited by my friend Dr. T. G. Morton to witness the procedure in a similar case in his practice, a full report of which he gave in the *American Journal of the Medical Sciences*, July, No. 135, pp. 116, 117. I feel quite confident that nothing else could have saved life in either case.

The condition of the patient on Monday, June 22, 1874, was critical in the extreme: pulse 160, feeble; surface cool, respiration panting; general lassitude, with disposition to drowsiness, amounting nearly to stupor. Transfusion of f $\frac{3}{4}$ iv of blood from the father yielded a result beyond our most sanguine expectations; in short, recovery began from that day, progressed, and at this writing, Nov. 2, is established. It is proper to state that on the third day following the transfusion, violent epistaxis recurred. This was arrested by plugging the nares, with the aid of Bellocq's canula. There was no internal medication, excepting quiniæ sulph., gr. iv daily, and the following, at the suggestion of my friend Dr. A. Frické:

R Tinct. nucis vomicæ, f $\frac{3}{4}$ ss;
Acid. phosphor. dilut., f $\frac{3}{4}$ ii;
Aque destillat., f $\frac{3}{4}$ i;
Syr., f $\frac{3}{4}$ ii.—M.

S.—Teaspoonful ter die.

The diet maintained was of the most concentrated character, such as juices of meats, eggs, milk, and cream, with a liberal supply of champagne daily.

Without entering into the consideration of the minute physiological conditions of the blood, and the agencies which affect it, I take it for granted that the blood is the medium that perpetuates both molecular and general growth, and through which repair is instituted. From what little I have seen of transfusion and its effects, I see no reason to oppose the views made public more than two hundred years ago, but rather to endorse the quaint words, "the blood may, if it takes, be of mighty use to man's health, for the amending of bad blood by borrowing from a better body." If the loss of blood causes a depression or a lowering of the vital forces, an extra supply should certainly be invigorating.

Respecting the method of transfusion, a rule applies to this as to all other operations in surgery, viz., the simplest is always the best. Undue haste in any part of the procedure must be avoided, and all preparations should be carried on away from the parties concerned: it is well to make every provision for what may occur in the way of accidents, rather than wish for things not at hand when, perhaps, too late. Hot and cold water, ice, old muslin, sponge, spirit of ammonia, stimulants, an operating or a pocket-case of instruments, in addition to those directly required in the transfusion, with at least two competent assistants, may be placed upon the list as requisites. The syringe should be in perfect order, for this is the instrument in this operation, and I certainly would not advise any one to run the

risk of being equal to the emergency and try to manufacture a syringe for the occasion from any glass one he may find about the house, for only a good blower could succeed in this.

The apparatus used for receiving and defibrinating (it should be termed "oxygenizing") the blood may be described as follows. It is not intended to be referred to as possessing any special merit over and above those already presented. There is scarcely any surgical apparatus which may not be extemporized, and *successfully*, when occasion requires and ingenuity suggests, but it is often a point to be able to connect luxuries and necessities. The receiver should be of a shape easily adapted to receiving the blood direct from the donor, and, being graduated, measures accurately the blood drawn, doing away with the necessity of transferring from one vessel to another, and serving as well for extra venesection should the quantity fall short of that deemed requisite. It can be readily and cheaply made, and, as I believe the air-tight syringe to be the best instrument for transfusion, the receiver should nicely fit the nozzle, and allow all the blood to be drawn into it. The application of all these means is the most apparent in that this operation is, in one respect, similar to that of tracheotomy for croup,—it is a last resort, allowed when there is little or no hope of anything else succeeding as life-saving. Therefore it is that all apparatus and all procedures should be as efficient as possible, and have economy of time as a principal feature.

I think it would have been simply impossible to employ the direct method in the case of this child, for even an ordinary amount of quiet could scarcely be obtained, and the use of an anæsthetic was not to be thought of. Proper care being exercised in the use of the syringe will give greater prospects of successfully transfusing blood free from any air whatever than by any other means that I know of. There are some conditions of the patient at the time of this operation, connected with if not dependent upon it, which it is well for all to know. The breathing becomes quite irregular, the efforts amounting to quite a struggle; the surface becomes cool and pallid, followed by rigor of unusual severity; the pulse is feeble and quite irregular, and fluttering. The patient repeatedly asks for water, and ice is taken with avidity even during the rigor; all the conditions are those generally accompanying a severe nervous shock. The treatment at this stage embodies the usual applications for restoration,—artificial heat, rubefacients, plenty of air, fanning, ammonia, stimulants, etc.,—and *must positively be persevered in until full reaction is established*. These symptoms seem somewhat alarming to one performing the operation for the first time, and might lead to the supposition that air had entered. I think they can all be explained by the fact of the heart being called upon suddenly to accommodate its action to a considerable quantity of blood after having been greatly depleted. Again, the shock may be greatly aggravated if the blood is introduced at too high a temperature; 100° is sufficient, or one or two degrees above may be allowed, to compensate for cooling in the handling. This last will be but

slight if the syringe is (as it should be) immersed in the same water which is used for heating the blood.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF R. J. LEVIS, M.D.

Reported by Dr. JOHN B. ROBERTS.

ENORMOUS HYDROCELE OF THE NECK IN A CHILD—PARACENTESIS OF THE CYSTS, AND REMOVAL OF THE SOLID PORTION BY THE ÉCRASEUR.

A FEW days after this child, now about three years of age, was born, there was observed a slight lump on the side of the neck, which has gradually increased in volume until it is at this time of the size of the child's head. The tumor extends from the ear to the clavicle, and from the chin outwards, hanging over the shoulder. It shows no signs of inflammation, is soft to the touch, and at various points presents fluctuation upon palpation. Some months ago it was tapped, and a considerable amount of fluid drawn off, after which, the parents state, a seton was introduced; but the treatment was not permanently successful, and the tumor has continued to increase in size.

The diagnosis of cystic tumor is easily made in this case, from the general characteristics of the swelling, and from the fact that there was serous fluid drawn off when the tumor was punctured.



To these cysts of the neck the terms hydrocele and hygroma have been applied, but they do not differ in nature from the serous cysts found in other parts of the body. They are more commonly situated in the glandular tissues, such as the ovary and mamma, and associated with adenoid tumors in the cervical region; but in this instance the cyst is

developed in the cellular tissue of the neck.

They may be, and perhaps generally are, congenital, and contain serum, or serum mixed with blood; sometimes, however, the contents are thick and viscid, and occasionally solid matters have been found within them. In this case the cyst is multilocular, as can be determined by the lobulated appearance of the surface, and by the fact that fluctuation is felt in sections only, and not in continuity through the different diameters of the tumor.

The radical treatment of these cases of large hydrocele of the neck is difficult, for excision is frequently impossible, since prolongations of the cyst extend deeply among the important cervical structures, surrounding the vessels and nerves in such a manner as to render extirpation of the tumor absolutely impracticable; and, on the other hand, the injection of solutions into such large sacs, to induce obliterative inflammation, is attended with danger on account of the resulting constitutional disturbance.

In this case the tumor is so large that it would not be safe to attempt to dissect it out, for it undoubtedly has deep attachments and is intimately blended with the subjacent structures. Neither would it be advisable to lay open the sac and allow it to suppurate, nor, on the other hand, to inject into it tincture of iodine or

carbolic acid, for there would be an enormous surface which might perhaps absorb the pus or the medicinal agent and thus cause the supervention of toxic symptoms.

When the child first came for treatment, there was debility and a general want of tone which demanded the use of tonic remedies before anything operative was undertaken. Now the various cysts shall be punctured, and the contents evacuated by thrusting a bistoury into the tumor at three points, from which the serum is seen to escape; there is also much solid matter and material of gelatinous consistence, forming a portion of the tumor.

In order to have as small a suppurating surface as possible, a portion of the cyst shall be removed by the écraseur. Since, however, the tumor is not lobular or pedunculated, it will be necessary to devise a means to keep the chain around its base: hence these long acupuncture needles are passed through the mass, transfixing it in various directions, and then the chain is placed behind these needles and drawn tightly so as to constrict the portion to be removed. By drawing on the chain, this portion, which is collapsed to the size of an orange, is gradually crushed off from the underlying structures, without the hemorrhage which would certainly occur if the knife were used. The great force applied has, however, broken the chain of the écraseur when the parts are almost separated, and the operation shall be concluded by using the knife, since there will not be much hemorrhage now after the constriction which has been exerted before the chain separated.

The object in removing this portion of the cyst is to obtain a small surface for the occurrence of suppuration, and thus to lessen the danger of excessive constitutional disturbance. The wound is dressed with carbolic oil, and the little patient given a dose of chloral and morphia to allay pain and induce sleep.

[Four days after the operation, a colliquative diarrhoea, to which the patient had been liable, occurred, which could not be controlled, and the child died from exhaustion, while the appearance of the wound was quite favorable.]

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF DR. LOUIS A. DUHRING.

Reported by ARTHUR VAN HARLINGEN, M.D.

EPITHELIOMA OF THE NOSE.

THE patient before us, a young woman some twenty-eight years of age, has suffered from this disease four years. It involves, as you see, the structures constituting the right ala of the nose, extending about half-way up towards the root; much destruction of tissue has taken place. The appearance presented is that of an unhealthy ulcer, covered with the products of suppuration and bordered by a rim of thickened and diseased tissue. The operation we shall employ for the cure of this case is as follows. Having provided ourselves with an abundance of rags and lint, a saucer containing a quantity of dilute acetic acid, and a stick of caustic potassa, we apply the latter with a firm hand to the diseased tissue in all directions. This melts down very readily before the caustic, and a little experience will enable one to know by the amount of resistance just when the healthy tissue has been reached. Complete destruction of the diseased parts being now accomplished, we lay aside the caustic, and immediately apply a piece of lint soaked in dilute acetic acid. This neutralizes the effect of the caustic potassa, the effect of which would otherwise continue to extend through the healthy surrounding tissues. The momentary pain caused by the application of potassa is almost imme-

diately relieved by the dilute acetic acid. We now dry the surface of the wound, and apply a simple dressing of olive oil upon lint. This will be renewed twice daily, and the surface of the sloughing mass kept as clean as possible. When the slough comes away it will leave a healthy ulcer beneath, which will heal rapidly. As it is often unadvisable or impossible to reach every portion of the diseased tissue at one application, we may find, when the wound heals, one or two small nodules still remaining. A subsequent application will suffice in that case to remove the last traces of the affection, but a deep scar will remain to mark its former seat.

EXTENSIVE ULCERATING SYPHILODERM.

The affection which involves this patient's leg is a chronic one; she tells us she has had it four years. The first thing we notice about it is its peculiar and disgusting odor. This at once excludes several diseases, and will aid us in our diagnosis. The discharge from the ulcers is profuse as well as offensive, for these rags, which our patient tells us were applied freshly this morning, are already soaked with the products of supuration. Examining the limb more closely, we see that there is a large area of disease, covering the front and sides of the whole leg, and involving the knee and part of the thigh. It consists of cicatricial tissue, patches and bands of inflammatory deposits, together with ulcers of various sizes, usually small. Around the outer and upper edges of the diseased skin a sort of advanced line of ulceration is slowly extending and forms a complete border to its upper portion. Without going into the various diagnostic signs, I shall state that this is an ulcerating syphiloderm.

The treatment of a case of this kind is simple. Having thoroughly established our diagnosis, we shall order the patient the most nourishing diet attainable, and, in addition, the iodide of potassium in the doses of ten grains three times a day. As an external application we shall order the following:

R Unguent. hydrargyri, ʒi;
Emplast. simplicis, q. s.—M.

The object of the plaster is to give consistency to the ointment, and the proportion may vary according to circumstances of temperature, etc. This is to be spread upon small pieces of soft rags and placed over the ulcers, avoiding contact with the surrounding skin. The application may be made twice daily, or oftener, and the ulcers should be kept as clean as possible.

TRANSLATIONS.

ACCOUCHEMENT IN A PATIENT WHO HAD SUBMITTED TWO YEARS PREVIOUSLY TO GASTROTOMY.—Dr. Fourrier communicates the following case to the *Bull. Gén. de Thérap.* for January 30:

The operation for gastrotomy which had been performed by himself was reported in the *Bulletin* for August 15, 1872. It was undertaken for the relief of rupture of the uterus with passage of the fœtus and appendages into the peritoneal cavity.

Since the time of this operation the general health of the patient had been as good as possible. She had been obliged, however, to wear an abdominal bandage, in order to support a threatened hernia of the intestines at the point of cicatrization.

Becoming again pregnant in 1873, the patient was removed, when the time for her confinement drew near,

to the hospital, where her accouchement was accomplished, August 15, 1874, without any accident. At the moment when the pains assumed an expulsive character, the hands of an assistant were employed in supporting the cicatrix, in order to keep the intestines in place, while Dr. F. himself supported the uterus.

The fortunate termination of this case is especially worthy of record, says Dr. Fourrier, since in similar cases the production of abortion at an early date has been suggested. Even in the present instance, indeed, the question was discussed.

To watch the labor, and to terminate it by version or by the application of the forceps in case it becomes too long delayed or too painful, should be, Dr. F. thinks, the duty of the physician, and he feels that in the case just described he has reason to congratulate himself on not having interfered too precipitately.

X.

ACTION OF CONIUM UPON CUTANEOUS SENSIBILITY.—M. Gubler reported, at a recent meeting of the Société de Thérapeutique, certain facts which show that hemlock modifies sensibility, and called attention in particular to the well-known phenomena attending the death of Socrates, and the observations recorded by Hunter, where a man who had taken a large dose of hemlock had lost the use of his fingers. He then went on to relate a case coming under his observation, where this action upon sensibility had been most evident.

It was that of a woman who had applied a pomade containing conium, with the fingers of her right hand, to a tumor of a cancerous nature situated upon her husband's body in the region of the liver. After a time, the fingers which had been used in making the friction lost their sensibility. The woman then ceased using the right hand and employed the left, covered with a glove; but in spite of this the fingers lost sensibility. All these symptoms disappeared rapidly upon ceasing the employment of the ointment.

Dr. Gubler draws attention to this fact in order to show the reality of those modifications of sensibility brought about by conium, a proposition which he had already recorded in his "*Commentaires de Thérapeutique*."—*Bull. Gén. de Thérap.*, January 30, 1875.

X.

A CASE OF HYSTERICAL HEMIPLEGIA (Dr. W. Svetlin: *Wiener Med. Presse*, No. 4, 1875).—The patient, a single woman, æt. 24, on the 12th of November, 1873, was exposed to cold just at the close of a menstrual period, consequent upon which she had spasms of the entire body very similar to those which result from poisonous doses of strychnia. Other symptoms of affections of a nervous character came on, and lasted for some time, but a gradual improvement took place which continued until February, 1874. On the 10th of the month, the patient, upon the receipt of news of a startling character, sank on her chair in a condition of unconsciousness. On the next day it was found that there was total paralysis of motion of the right side, with a diminution of sensibility.

About the end of March, treatment of the paralysis with the induction-apparatus was commenced, and after forty sittings there was some improvement in the motion of the upper extremity, and the voice, although still unintelligible, became more sonorous. From July the use of electricity twice a week was continued, and hydropathic treatment was also employed. The patient was twice a day rubbed down in baths the temperature of which was lowered one degree daily. By the end of the month, the patient was able with but little assistance to walk about the garden of the establishment, dragging the right foot but slightly, and could even go up-stairs.

W. A.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MARCH 13, 1875.

EDITORIAL.

THE WORK OF THE SURGEON-GENERAL'S DEPARTMENT, U.S.A.

A RECENT visit to Washington has afforded us the opportunity of overlooking the work which is being done under the fostering care of Surgeon-General Barnes; and it is with pleasure that we express our extreme satisfaction therewith. The forthcoming volumes of the "Medical and Surgical History of the War of the Rebellion" will, we believe, excel in general value their predecessors. The report now in preparation by Dr. Ely McClellan on cholera bids fair to be one of the most remarkable and exhaustive memoirs of the kind ever published. Dr. Billings is building up, with marvellous celerity and cheapness, what will soon be one of the world's great medical libraries. He has undertaken and made considerable progress in the colossal task of preparing a subject-index of medical periodical literature of this century. As the library now receives all the medical journals of the world, with the exception of a few obscure periodicals published in Greece, Spain, and Mexico, Dr. Billings has at hand the complete material for at least the recent times. All original papers are catalogued, not by their titles, but by their actual subjects, Dr. Billings himself looking over the papers and inserting the references to them. The extreme value of a catalogue of this character is at once apparent, but the labor involved is so enormous that, with the small number of assistants allowed by the funds, a long time must elapse before it is completed. Moreover, the literature of the later portions of the

century is by far the most important. We therefore sincerely trust that the catalogue will be finished by decades, beginning with the present, and will be published as fast as completed; otherwise we fear that our grandchildren will have more interest in the work than we have. The remuneration, direct and indirect, which these busy workers for our profession receive from the United States Government is absurdly disproportionate to the services rendered, and it is with great disgust that we learn of the adjournment of Congress without anything having been done for them. The Republican party, having attained power by the successes of the army, have turned it out to starve like a worn-out war-horse. We trust that if the Democrats get a turn at the wheel they will do better.

LEADING ARTICLES.

SALICYLIC ACID.

IN the *Journal für Praktische Chemie* for July, 1874, Prof. Hermann Kolbe published an article upon a new method of obtaining salicylic acid, and some of its remarkable properties, which, apart from its interest to chemists, contains much to attract the attention of others. After describing his new method for the production of the acid, which consists essentially in treating a solution of phenol in caustic soda with carbonic acid under the influence of moderate heat, Prof. Kolbe passes to what he terms the physiological effects of salicylic acid, which, up to the time that his new method placed it within easy reach of all, had been studied only by Berlaghini, who found that in large doses—six grammes in two days—it produced ringing in the ears, and that during its passage through the body it was partly changed into salicyluric acid, which, together with some unaltered salicylic acid, was found in the urine. In an experiment performed in the Leipsic Hospital it was found that when 0.3 gramme was given by the mouth the acid made its appearance in the urine at the end of two hours, and was still recognizable in that excretion at the end of twenty. As salicylic acid is, by the new process, made from carbolic acid and carbonic acid, and as by heating above the boiling-point it splits into the same substances, Prof. Kolbe thought it probable that it might have an antiseptic action and interfere with the processes of fermentation and putrefaction. The experiments undertaken by himself, which he is still busily engaged in prosecuting, and those of others, seem to show undoubtedly that he has discovered a very important addition to the armamentarium of those who are interested for any reason in combating the action of these processes. We give below a summary of the results so far published in the numbers of the above-named journal for December, 1874, and January, 1875.

Prof. Kolbe has found that the presence of salicylic acid prevents the formation of hydrocyanic acid in an emulsion of sweet and bitter almonds, as also the formation of the characteristic volatile oil which usually results on wetting mustard; also that, added to a solution of grape sugar containing yeast, it prevents fermentation, as it does also in beer. In an experiment upon milk, he found in the summer at a temperature of 30° C. (86° F.) that fresh milk to which a 0.04 per cent. solution of salicylic acid had been added became sour thirty-six hours later than another specimen to which no acid had been added. Added in this proportion, the acid imparted no taste to the milk. Urine to which it was added did not decompose.

He has also instituted some experiments as regards its power of preserving meat, eggs, and other articles of diet, as well as water, several casks of which he has stored away after adding varying quantities of the acid to them. The salicylate of sodium does not answer the same purpose, though Prof. Kolbe was led to experiment with it by the idea that when an acid was produced, as in the souring of milk, any base with which the salicylic acid was combined might be of service in neutralizing it.

Neubauer asserts, as the result of an interesting series of experiments performed by him, that we have in salicylic acid a means for controlling fermentation in urine, and a substance which is likely to be of inestimable value in the future.

Dr. Miller, a pharmacist, has compared the antiseptic properties of carbolic and salicylic acid. According to him, one part in 1000 of either will stop fermentation in grape sugar; one part in 2000 of salicylic acid is also effective; while this proportion of carbolic acid has no action whatever. In milk containing 0.04 per cent. carbolic acid, the latter is readily perceptible to the taste. It becomes sour, however, as readily as another specimen to which nothing has been added. Salicylic acid as noticed by Kolbe gives in this proportion no taste to the milk, and at the high temperature of 86° F. retards its souring notably; at lower temperatures its preservative action lasts much longer.

When, however, two specimens of the same urine were exposed to the air, one containing carbolic acid and the other salicylic, he found that a much larger quantity of salicylic acid was needed to prevent putrefaction than of carbolic acid. Salicylic acid in the proportion of one per cent. checks the action of ptyaline upon starch. To produce the same effect, ten per cent. of carbolic acid is needed. So in an experiment upon glycerin he found that while ten per cent. carbolic acid was needed to prevent the formation of sugar, 0.5 per cent. salicylic acid was enough for the purpose. It is worthy of special notice that the same observer found that while 0.2 per cent. carbolic acid does not interfere with the digestive action of pepsin, 0.2 per cent. salicylic acid interferes to such an extent that he concludes that a solution containing 1:1000 destroys three-fourths of the digesting power of an artificial gastric juice. This experiment carried on outside the body

does not, apparently, agree with the experience of Prof. Kolbe, who, in order to satisfy himself and others as to the effects of internal administration of the acid, took for several days in succession, in four portions, 0.5 gramme in watery solution 1:1000 without any ill or other consequences whatever. He then intermitted taking it for a week, at the end of which time he took one gramme a day for five days, and then on two successive days 1.5 grammes. These last portions were taken in a liquor which he compounded for the purpose, and which was then made use of by eight of his assistants and students, who took on one day one gramme, and on the next 1.5 grammes each, making in all twenty grammes, yet in no case was the slightest abnormal symptom observed. The urine and fæces of all were carefully collected, and we are promised the results obtained by the investigation of them.

Prof. Kolbe remarks with regard to his first experiment that throughout the time digestion was perfectly normal, and no unpleasant sensations were experienced. In the urine the acid was readily detected on the addition of the chloride of iron (which gives a violet reaction) after a precipitation of white phosphate of iron, but no trace of it was found in the fæces. Prof. Kolbe also, in order to test how far the acid could be absorbed through the skin, prepared a warm bath at 93° F., containing 250 kilos water in which 250 grammes of salicylic acid had been dissolved. In this he remained ten minutes, experienced no unpleasant sensations, and, as was perhaps to be expected, found no positive evidence of the presence of the acid in the urine passed during the rest of the day.

He now proposes to experiment by giving the acid to children before vaccination and during the course of the disease, in order to see whether the lymph obtained from such cases still retains its procreative power. This idea is the result of a conversation between himself and Prof. Beneke.

To pass now to the observations of medical men. In the service of Prof. Thiersch at the hospital in Leipsic, the acid has been found to remove foul odors, and the use of a solution containing one part salicylic acid, three parts phosphate of sodium, and fifty parts water, was found favorable to the healthy growth of granulations.

An operation was performed where salicylic acid took the place of carbolic acid. A spray was used 1:300, and the dressing was composed of charpie filled with crystals of the acid, and moistened with the 1:300 solution, which was afterwards used for irrigation at the rate of eight drops a minute. The case had a speedy and successful termination. The acid was found in the urine. From these and other experiments it is concluded that, as far as can be seen, salicylic acid has the beneficial effect without the disagreeable smell and poisonous character of carbolic acid. Dr. Fehling reports from the Gynæcological Institute of Prof. Credé, that in their practice they have found it of service used in solutions varying from 1:300 to 1:900 water, and in powder one part mixed with five parts starch, and promises a more

complete account in the *Gynæcological Journal*. Dr. W. Wagner, of Friedberg, has tried it during the last six months in all such cases as are generally benefited by carbolic acid. He finds that it renders the discharges from recent and chronic ulcers inoffensive. Using it first as an ointment—one part salicylic acid to fifteen parts lard—he found it unsatisfactory, and so had an ointment made by dissolving 1.5 grammes acid in three grammes alcohol, and mixing this with fifteen grammes lard, thereby securing a very efficient preparation.

Having been pleased with its action externally, he proceeded to apply it to two classes of cases: 1, those in which disease of the stomach or intestines is associated with abnormal fermentation of their contents, under which head he treated a case of cancer of the pylorus, which was rapidly approaching a fatal conclusion, and rendered the last days of the patient comparatively comfortable, checking the putrefaction of food, and consequent vomiting. He gave in this case 0.5 gramme in powder three times daily, and found the same dose of decided service in a case of chronic intestinal catarrh. In two cases of severe diarrhoea in children he gave a child one year old 0.05 gramme, and to a child three years old 0.1 gramme every three hours, in powder, with gratifying benefit. No more satisfactory result has been obtained than by Dr. Wagner in fifteen cases of diphtheria, of which more than half were of decided severity, and none really light. In the treatment of these, to children not able to gargle he gave 0.15 to 0.3 gramme in powder, mixed in water or wine, every second hour, and in addition caused those who were able to make use of a gargle containing 1.5 grammes dissolved in 15 grammes alcohol, and mixed with 150 grammes distilled water. If in this crystals formed, they were readily dissolved by gentle heating.

Of these fifteen cases none died,—a result more favorable than he had expected from the character of the disease at the time, and in all the duration of convalescence was much shortened, being in the mild cases from three to five days, and in the severe at most eight days.

It is to be remarked that Prof. Kolbe advises against the internal administration of the acid in the form of powder, as he has found that it attacks, to a certain extent, the mucous membrane of the mouth, œsophagus, and stomach.

Experimentation with this new agent is to a great extent in its infancy even in Europe, and it is to be hoped that some of our chemists will soon place it in the power of our physicians to see for themselves how far what is hoped from it can be realized in practice.

If it be really—and there seems to be no good reason to doubt it—as good an antiseptic as carbolic acid, its freedom from odor and from poisonous properties gives it an incalculable advantage over the latter, which will not be lost even if as a remedy in disease it may not be as Prof. Kolbe seems to expect.

H. B. H.

LEIPSIK, February 8, 1875.

CORRESPONDENCE.

NEW YORK, February 15, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—At a recent meeting of the Society of New York County, Dr. Simon Fitch, of this city, who has made an improvement upon the old trocar with especial reference to ovariectomy, aspiration, and transfusion, read an excellent paper upon the subject, of which the following is a synopsis.

The trocar, formerly seldom employed, he said, and of little value, has within the last few years become one of the most important instruments in the surgeon's armature, and is at present in almost constant use.

Many diseases and ailments for the detection and cure of which the trocar is now generally used are situated in or adjacent to either the lungs, heart, brain, spinal cord, abdominal viscera, pelvic organs, or the great joints; and where it is considered that these vital and sensitive structures require solicitous protection against all mechanical injury beyond what is essential to the discovery and extirpation of their diseases, it will be evident that the instrument used, whether for exploration or treatment in or upon such parts, should be—

1. Easy of insertion, so that it may not bruise, lacerate, or stretch the walls of the cavity to be entered, nor disturb the connections or relationships of the neighboring parts.

2. Harmless when inserted, so that it shall not injuriously abrade; does not scratch or puncture the interior of the cavity or adjacent structures.

3. Competent to give the freest possible exit, consistent with its size, to the fluids which are to be discharged.

4. Apt to leave, upon withdrawal, such wound as will most readily heal.

The old trocar, with its canula fitting more or less loosely behind the triangular head, is a clumsy and dangerous instrument. The aperture made by the point of the instrument is forcibly dilated by the bulging occiput of the trocar-head. Then the split end of the canula does not pass in smoothly, but, as it is expanded in being pushed forward over the head of the stylet, is liable to get entangled in the tissues at the edges of the triangular aperture, and so fail to enter perfectly, or, if forced in past the obstruction, the orifice is still further stretched and the edges irritated, or perhaps lacerated; and upon withdrawal of the instrument there is left a jagged, punctured wound, indisposed to heal by the first intention.

In 1850, Sir James Y. Simpson had the head of the stylet reduced the same size with the shaft, so that it should stretch the orifice less, and, as the canula could then be advanced without spreading, he omitted the split in the end; and at the same time he announced his employment of a long, slender trocar, with an exhausting syringe attached, as a means of diagnosis in various internal enlargements, especially in pelvic tumors, and so initiated the idea which Dieulafoy subsequently elaborated into his admirable aspirator.

The idea of making the canula itself pointed, so as to penetrate independently of the stylet, was first suggested in 1853, by Fergusson of London, who contributed a pen-like tubular needle for injections of the perchloride of iron in the treatment of nævi and aneurisms. In 1858, Dr. Alexander Wood, of Edinburgh, adapted this instrument to the subcutaneous injections of morphia, and a modification of the same instrument is now in universal use.

Spencer Wells shortly afterwards enlarged this little tubular trocar for ovarian tapping, and made the edges of the pointed end sharp and cutting for one-half the circumference of the tube, whereby a semilunar cut is made (if sharpened all round it would cut out a circular piece and leave a round hole), and he added a sliding outer canula, which, upon puncture being effected by the cutting point of the inner tube, is pushed forward as a guard against further action of that point.

This instrument, superior in many respects to the old trocar and canula, especially in respect of the wound made by it being incised rather than punctured, has still, in common with it, this grave fault, that the protecting tube is on the outside, and if made thin, so as to pass more easily into the aperture made by the point of the inner tube, the open end becomes a cutting edge, dangerous to the interior of the cavity and to the contained or adjacent viscera, as the bladder, when the contents are discharged by puncture, or the heart in tapping of the pericardium, or the lung in paracentesis thoracis, or the intestines in tapping for ascites. (The outer tube is sometimes obtusely rounded, so that it may enter more easily, but this makes it more dangerous to the interior.)

But if the terminal edge of the outer tube be blunted or made thicker, so as better to protect the interior, then it necessarily presents a resisting margin or shoulder outside and behind the point of the inner tube, liable to catch and carry before it the sac, or the immediate investment of the cavity, and so fail to enter properly.

Now, this accident may occasion considerable inconvenience, or even be productive of great harm, in cases of simple tapping, or for hydrocele, when, if the tunica vaginalis is not very tense, it is oftentimes extremely difficult to get the outer canula pushed in over the puncturing end; and in empyema, with a thick and tough pleura, so much force is sometimes required to urge the entrance of the outer tube as really to endanger a separation of the membrane from the ribs; and in tapping for the temporary relief of ovarian dropsy, if the outer tube do not follow the trocar quite into the cyst, or if in entering it catch or tear or split up a fragile cyst, more or less of the cystic fluid will escape into the abdominal cavity, which is one cause of the fatality that sometimes follows this simple operation.

But should *injection* be attempted with an imperfect introduction of the protecting tube, whether that tube be the canula of the old tube, or the outer tube of Wells's trocar, the result may be most disastrous.

The essayist had seen intense peritonitis occasioned

by tincture of iodine thrown upon the peritoneum in such an attempt to inject an ovarian cyst. And Syme, in his "Principles of Surgery," noticing the faulty injection for the cure of hydrocele, remarks, "If the liquid is allowed to remain in the cellular substance, it gives rise to violent inflammation, and soon terminates in sloughing of the scrotum."

Dr. Fitch had encountered on many occasions difficulties similar to the above, and in common with others tried to obviate the uncertainty of entrance of the outer canula, by cutting down to the peritoneum, or pleura, or tunica vaginalis, or whatever might be the immediate investment of the fluid to be evacuated, or the cavity to be entered, until it occurred to him to *reverse the relation of the tubes to each other*; and while in Edinburgh, in 1871, he had an instrument made by Gardner, upon the following plan: The outer tube, smooth and of uniform size, has the distal and pointed end cutting *like a lancet*, so that it penetrates easily, and to any depth, without the necessity of any previous incisions of superimposed tissues, and the protecting tube, being inside, may be advanced into the interior of the cavity with absolute certainty of entrance, and without the possibility of even touching the margin of the aperture or any of the tissues through which the outer tube has passed. The cutting portion of the puncturing tube should rise from the point not suddenly nor in a curvilinear form, but gradually, and in a perfectly straight line, making an angle of less than 45° with the pointed end of the tube, so that it shall enter by a clean incision, without injury to the aperture. The same year, instruments were made similar to the above by Krohne and Sesemann, and were exhibited at the next meeting of the British Medical Association in London, in August, 1873. The largest size is noticed in Spencer Wells's recent work on "Diseases of the Ovaries," p. 336. But the smaller-sized instruments seem to have been overlooked. Mr. Alfred Goodrich, in a letter to the *British Medical Journal*, August 8, 1874, says, "In emptying a cavity with the aspirator, the operator is often alarmed by finding the instrument filled with blood, arising from the walls of the collapsing cavity being forcibly sucked against the sharp point of the needle," and he proposes, as if it were his own idea, that the trocar consist of two tubes, the outer one pointed, the inner one not so. But in the same journal for August 22, Mr. George Brown, of the N. E. Hospital for Children, referring to Mr. Goodrich's suggestion of a trocar guarded by an inner tube, remarks, "The idea is not original. We have had one in constant use for more than twelve months, which was supplied us by Messrs. Krohne and Sesemann," who were the makers of Dr. Fitch's instrument in 1871, and which in the Catalogue of the Museum at the forty-first annual meeting of the British Medical Association is designated "Wells's Trocar, Improved by Fitch."

Yet this instrument is *not perfect*; for, although the certain entrance of the protecting tube is securely provided for against the possibility of failure, yet the open end of this same tube may itself be a source of danger,

especially in the aspirator trocar, when it must be made very thin to avoid bulk.

A very important modification of the original instrument covers the danger of an open canula, and makes it, while performing the ordinary purposes for which a canula is used, likewise available as an efficient and safe exploring probe or sound.

The distal orifice of the inner canula has been closed over by a rounded or dome-shaped roof, so that when it is projected beyond the cutting point of the outer canula the two tubes fit closely together; and the end of the combined instrument fits perfectly smooth, like the end of a sound or catheter, and may be freely moved within the cavity penetrated, without danger of wounding any viscera or organ, puncturing any vessel, or even scratching or abrading the tissues of the cavity, or any part contained therein. The base of this dome being of the same external circumference as the inner tube, and fitting the outer tube accurately, when the point of the instrument enters a cavity there can be no escape of the fluid till the dome is advanced, occluding the cutting point of the outer tube; thus there is disclosed a fenestra, or oval aperture, on the lower end, cut out of the lower wall, and two-thirds of the breadth of the side-walls of the inner tube, of the full size of the tube, and by which the fluid may be freely evacuated. The segment in the tube forming the distal end of the fenestra is sloped off, so that if a flake of pleura or accidental piece of tissue rest upon it, it will slip off as the instrument is withdrawn from the cavity. But the lip at the proximal boundary of the segment projects in a curve over nearly a third of the fenestra, so that the fenestra may not be obstructed by any substance in the cavity.

The trocar thus constructed is harmless to the parts requiring protection, and the fenestra, so guarded, and being, moreover, on the under side, cannot be stopped by the wall of the cavity coming into contact with it, as often happens to the open end of the old canula, by the falling upon it of any of the viscera or any layer of false membrane or fibrous septum; and if there be any aggregations of cyst, or a multilocular sac, the instrument may be employed as a probe or sound, or a long artificial finger, with which to feel for a proper place where it may be held until the cutting point is advanced to make an aperture for its introduction.

Thus, in ovariectomy it will be found extremely convenient, the left hand supporting the tumor, and the right holding the instrument, which can be instantly changed, by an easy movement of the same hand, from a trocar to a sound, and, *vice versa*, to define and puncture cyst after cyst, until the bulk of the whole is sufficiently reduced to admit of withdrawal through the abdominal incision, and with only one outer aperture in the sac first punctured, and thus always occupied by the instrument; and it may be here used where the end of the open tube could not be safely, to stir up and liquefy locular contents, and to break down such obstructions to the flow, while it still closes the original aperture, thus preventing the escape of the cystic fluid into the

cavity of the abdomen; and it may then obviate the necessity of enlarging the aperture in the cyst for the introduction of the hand.

Dr. Fitch thinks that the trocar may be used to advantage in the operation of transfusion. A trocar of suitable size being attached to each end of an india-rubber tube a foot long, one of the trocars is inserted into the vein which is to furnish the blood, and when the apparatus is filled, the other trocar is introduced into the receiving vein, and the operation is completed.

The advantage of the trocar in this connection is that, being smooth upon the end, the vessels may not be injured, and all the other evils attending the ordinary method of transfusion are avoided. The operation, moreover, may be performed quickly and with little trouble.

He uses also for ovariectomy, and in all operations where fluid of any kind is to be concentrated, a rubber tube, slipped over the end of the trocar, for the purpose of conveying to a proper vessel the fluids to which exit is given. By this means the clothing of the person or bed may be kept perfectly dry and clean.

The Society, after expressing their approval of the instrument, and thanking the author of the paper for presenting it, adjourned. W.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 15, 1875.

(Continued.)

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

Hepatic abscess, opening externally in right side—Death from exhaustion.

DR. WILLIAM PEPPER exhibited the liver with portions of the lower right rib attached, with the following history of the case:

W. S., æt. 30, was admitted to the Philadelphia Hospital October 11, 1874. He was of intemperate habits, but had never had venereal disease nor dysentery. Had never lived in any tropical climate. Several years before, while in the army, he was wounded in the left side by a charge of duck-shot, part of which remained, but gave rise to no subsequent trouble. He first began to complain in March, 1874, of severe pain in the right side. This was at first paroxysmal, but soon became dull and continuous, and was attended for six weeks with hectic fever. This diminished, and soon there was noticed bulging of lower part of antero-lateral aspect of right thorax. The swelling extended around base of chest on right side, but was most prominent about seventh and eighth ribs in line of anterior border of axilla. Here it was, when it first appeared in June, very hard, but by August it had become softened, with indistinct fluctuation; and, on the 22d, eight fluidounces of pus were withdrawn by the aspirator by Dr. Tyson. The minute opening did not close, but continued to discharge pus quite freely. His general condition, under the use of tonics and nutritious diet, remained quite good for some time, but by October he began to lose ground decidedly. There was an ulcerated opening in eighth interspace, from which large discharges of pus occurred daily. A probe could be passed six inches

upwards and inwards through the intercostal opening. The liver-dulness began at sixth interspace, and extended to two inches below margin of ribs. Injections of various medicated liquids were used, but without any beneficial effects on discharge. Before December the tissues around the fistulous opening began to slough, and portions of the eighth and ninth ribs were exposed in a necrosed and roughened condition. His general condition grew rapidly worse, and death occurred on December 2.

Autopsy, six hours after death.—The ulcerated surface on the right side was seven inches long by five wide, extending from the sixth interspace above to the eleventh below. It was perforated by an opening in the eighth interspace, and by another some two inches in length in the ninth. Upon removing the sternum, nothing abnormal was noticed in the thoracic cavity, excepting an adhesion of the lower surface of the right lung, by slight cellular bands, to the diaphragm. No perforation of the thoracic cavity had taken place. Immediately below the diaphragm quite a large abscess was found occupying the right extremity and upper surface of the liver, the space between it and the diaphragm and right kidney, and communicating with the external opening.

Liver but slightly enlarged. Structures at a distance from the abscess fatty. Surface of right kidney ulcerated; its structure indurated and firm. No extended peritoneal involvement. The liver, diaphragm, ascending colon, and right kidney were firmly bound together, circumscribing the abscess.

Remarks.—This case presented several features of great clinical interest.

1. As to the locality of the abscess. The absence of the usual causes and symptoms of hepatic abscess, the previous severe pain in the right side, the point of rupture, and the physical signs, raised the question whether the case was one of circumscribed pyo-pneumothorax, or of abscess beneath the diaphragm. And the difficulty of determining this was increased by the close adhesions beneath the under surface of the right lung and the diaphragm, and the great degree in which the latter muscle was stretched upwards.

2. The question as to the starting-point of the disease. It might be regarded as possible that the disease had originated in connection with the rib; but a careful consideration of the case appears to render this untenable. It will be noticed that the hectic fever, which undoubtedly marked the occurrence of suppuration, preceded by some weeks the first appearance of external bulging. Again, the readiness with which a collection of pus forming in connection with the rib might discharge externally, renders it highly improbable that it could effect such extensive internal trouble before finding an exit through the skin. Abscess of the liver in rare instances arises in this climate idiopathically, or at least without recognizable cause, and it is very rare for the entire course of the disease to be unattended by any special symptom of hepatic disturbance. The post-mortem appearances of the liver, finally, show such a degree of destruction of its tissue as to indicate that the abscess originated in its substance.*

Dr. JAMES TYSON remarked that from his knowledge of the case as it existed while under his care, he could not feel altogether satisfied with the idea of the hepatic origin of the abscess. The almost stony hardness of the tumor of the side as presented when he first saw the case, the remoteness from the liver of its most prominent portion, as well as its apparent superficial position, all led him to suppose it was associated at its

beginning with disease of the ribs, although the traumatic nature of its origin as suggested by the patient was not entertained for a moment, as the gun-shot wound was on the opposite side. He had never suspected any relation of the abscess to the liver either primarily or secondarily.

Dr. PEPPER said that against the idea of its having started from the ribs were the facts that while the man had suffered from pain on the right side for months, and that while there was found so extensive a lesion internally, the external swelling presented itself a comparatively short time before its evacuation; and we must suppose that if it started externally, it had perforated, by ulceration, the diaphragm and the firm fibrous capsule of the liver, and had destroyed a portion of the liver three inches in diameter by one and a half inches in depth. These facts, taken in connection with the well-known phenomena of hepatic abscess, its occasionally latent character, sometimes advancing to rupture without having given any marked evidence of disease of the organ, seem to leave no other conclusion to be arrived at than that it was a hepatic abscess which had worked its way externally to the point described.

Dr. BERTOLET asked whether there were any evidences of embolic processes. Portal thrombosis being by far the most common cause of hepatic abscess, it is very important to ascertain the presence or absence of ulcerative and inflammatory processes in the intestines and gall-bladder; indeed, it is now denied by many that primary suppurative hepatitis ever occurs, but that the origin of hepatic abscess is by an embolus or foreign body obstructing a blood-vessel. Even traumatic affections of the liver only rarely lead to the formation of abscesses, and preferably when complicated by the presence of a foreign body.

Dr. PEPPER replied that no careful examination had been made to this end, but that while abscess of the liver, especially of the metastatic form, which is so frequent, was apt to be attended by a partial stasis or thrombosis, he could not think that embolism was the only cause of such abscess. In a number of cases which he had studied of hepatic abscess following dysentery, he had observed portal thrombosis around the abscess.

Dr. ALLEN said that in gun-shot wounds of the liver the pus therefrom was sometimes observed to have a peculiar color due to blood-staining, caused not so much, however, by the presence of blood as by its coloring-matter, hæmatin, or derivatives.

Head of the femur removed by excision in a case of coxalgia.

Dr. J. M. BARTON presented the specimen, from Mina F., æt. 10 years, with a decidedly strumous history; has suffered from the usual symptoms of coxalgia for the last fourteen months, suppuration beginning five months ago, the amount of discharge being quite moderate until the middle of December, when, the child having lost appetite and flesh, hectic fever having appeared, and the discharge from the sinuses becoming quite profuse, excision was determined upon.

"On December 22 I excised the head of the femur in the usual manner. The femur was found dislocated upon the dorsum of the ilium, as the deformity indicated. The acetabulum was free from disease, except a small portion of its lower margin, which was readily removed.

"The patient did remarkably well for two weeks. Appetite very good; bowels natural; no pain, and the discharge quite moderate in amount; but from this time she gradually sank, and died exhausted, January 11, twenty days after the operation.

"I have here also the upper extremity of the shaft of the femur, removed post mortem, showing the efforts at repair. It was nearly in contact with the acetabulum, and its attachments to the pelvis were quite firm."

* To this must be added the absence of any traumatic cause of necrosis of the ribs, and also the absence, as shown by careful examination of the patient's history, of any syphilitic taint.

Case of malformation of the nose.

Dr. FERDINAND H. GROSS, presenting the case, said that he had to exhibit the body of a male child born at term with a peculiar malformation of the nose. That the organ consisted of a mere cylindrical fleshy tube starting out from between the eyes or the position of the root of the nose, its dimensions being a little over an inch in length and about half an inch in diameter. That there was no cartilage of the septum nor columna, and instead of the two anterior nares there was but one small round opening or canal. It was quite soft and flexible, and bore a resemblance to the male organ of an infant.

Dr. Gross stated that the case had come to his notice under the following circumstances: That on the previous day, while visiting a case of frost-bite in the house of a midwife, the latter informed him that on the same morning a German woman, the wife of a butcher, had been unexpectedly taken with strong labor-pains while standing at her stall in the market, and that there had been only time enough to get the woman into the house of the midwife, which was in the neighborhood, when she gave birth to this child. She reported that it showed signs of life immediately, that it cried, breathed imperfectly for nearly an hour, and then died. The body was quite livid when first shown to Dr. Gross, and the cause of death was no doubt asphyxia.

The mother was twenty-four years of age, and had borne four healthy children.

The specimen was referred to a special committee, consisting of Drs. F. H. Gross, Harrison Allen, John Guit  ras, and John M. Keating, for examination and report.

Cystic kidneys; obstruction by enlargement of the lateral lobes of the prostate gland.

Dr. W. H. PARRISH presented the specimen, for Dr. C. M. HARRIS. A. F., aged about 60 years, died January 10, 1875. He was seen by Dr. Harris for the first time one day before death, and no history of prior condition could be obtained. When seen, he was suffering with pelvic and abdominal pains, and pain down each thigh. He died in slight coma, without convulsions.

Autopsy, January 11, 1875.—There was general emaciation; slight atheroma of valves of heart. *Lungs* normal. *Liver* cirrhotic. *Intestinal tract* apparently normal. *Prostate gland* greatly enlarged and quite firm. *Bladder* contracted, walls much thickened and in a rugose condition; the openings of the ureters into the bladder were diminished in calibre. The *ureters* were examined only at their extremities; the upper extremities were dilated. *Pelves of both kidneys* dilated, as were the calyces of both. In the pelvis of the left kidney and upper portion of the left ureter were about two ounces of muco-purulent fluid.

The parenchyma of both kidneys was diminished in quantity, as if atrophied from pressure.

Hermaphroditism.

Dr. JOHN M. KEATING exhibited the specimen, which was referred to a special committee, consisting of Drs. Keating and Harrison Allen, for report. The Committee reported, January 28, 1875, as follows:

"Your Committee to whom was referred the specimen of hermaphroditism exhibited by Dr. J. M. Keating have to report that, upon examination, the *uterus* and ovaries were found in position, not presenting any abnormal conditions in regard to shape and development. Immediately in front of them was seen the bladder, much contracted by the action of strong alcohol used to preserve it: it had assumed the character of a solid tumor before it was opened. *Ureters*, although somewhat torn, were easily traced, a probe passing readily through them. The relations of the urethra

were normal. After careful search, neither testicles nor any trace of them were found within or without the abdominal cavity. Externally, the labia were much enlarged. The clitoris, though probably much contracted by the strong alcohol, was about the size of the penis at term. The anterior orifice of the vagina was obliterated by a true integumental growth, which was continuous with that of the perineum.

"Your Committee therefore conclude that the specimen belongs to the class of spurious hermaphrodites characterized by the presence of true female organs conjoined with excessively developed external organs and imperfect development of the vagina."

Lipoma.

Dr. JOHN ASHHURST, Jr., exhibited a large fatty tumor removed from the left infra-mammary region of a male adult. The growth was, as is usual with tumors of this nature, surrounded with a distinct capsule, which sent off prolongations, forming septa which separated the several lobes of the mass.

Scirrhus cancer of pancreas, liver, and lung; hydatid cyst of liver.

Dr. H. R. OSGOOD presented the specimens, and read the following history: "The organs which I have the honor of presenting to the Society were taken from the body of a female,   t. 81. I was called to this person shortly before her death. Found her in great discomfort, the painful symptoms radiating from the vicinity of the stomach. Patient referred her pain to a spot somewhat at the left of the median line, but in the epigastric region. Pressure revealed the greatest sensitiveness in the median line an inch or two below the xiphoid cartilage. The patient was annoyed by constant vomiting, and was unable to retain either food or drink. It was principally with reference to this symptom that I had been called, for the pain just mentioned, although constant, was not excessive. It was only when I resorted to palpation that it became unbearable. Percussion also created such distress that because of the advanced age and great debility of the patient, and especially since I saw she was sinking, I refrained altogether from any attempt to establish a diagnosis, and directed my attention to the relief of the gastric symptoms. Under the influence of bismuth and morphia the vomiting ceased, and a fair amount of milk and lime-water, as well as beef-tea, was taken for a short time. Wines, including champagne, were not kindly borne. The heart pulsated normally. I discovered a mild bronchitis, which accounted for the patient's cough. There was obstinate constipation, which was relieved by enemata. After a day or two of the improved condition of the stomach, the patient again refused food of every sort. Injections of beef-tea were administered without avail, and she passed quietly away. I regret that my clinical details are so meagre; yet, under the circumstances, I felt justified in sparing the patient what would have been a painful examination. She was in a too prostrated condition to give me her history. Her immediate attendants simply knew that she had been treated for dyspepsia during the past summer at the Woman's Hospital. It was not until after her decease that I had the good fortune to learn some details of her history from a lady to whom the patient had several months ago related them. It seemed that the deceased referred the beginning of her illness to a day so long as twenty-five years ago, when she was engaged upon her son's farm in gathering stones, which she removed by the help of basket and apron. She had filled her basket, and then proceeded to fill her apron, the end of which she held in one of her hands. Upon lifting her basket with the other hand she suddenly felt something give way in the vicinity of her stomach. She fell senseless to the ground, and was carried to her bed, in which she re-

maintained for a period of eight weeks. Subsequently she labored constantly, but with less strength and vigor than formerly. Excepting that the patient never entirely recovered from the effects of this occurrence, I could learn nothing concerning her health during the seventeen years which intervened between this and another injury which the patient received in falling down a flight of stairs. This was eight years ago. She was again taken up senseless, and again confined to her bed for several weeks. Patient thought this fall aggravated the original injury, and never felt well thereafter. Previously a very stout person, she became much reduced in weight. She frequently said there was some internal derangement, and, curiously, imagined that her 'sweetbread' was involved. She was familiar with the anatomy of the pig, and hence her remarkably correct supposition. The remitting symptoms of her ailment during the past eight years were great restlessness, irregularity of appetite, frequent vomiting of food, pain in the epigastric region, obstinate constipation. These data of her complaint became so severe in the early summer of last year as to lead her to seek aid at the Woman's Hospital, where a physician examined her with great care and finally pronounced the difficulty a violent form of dyspepsia.

"The friends of the patient consented to a post-mortem examination of the body. There was marked emaciation, but no external signs of injury. Heart somewhat atrophied, its muscular tissue flabby, valves normal. Slightly atheromatous condition of the ascending aorta. Left lung in a fair condition. Right lung bound down by pleuritic fibrous tissue of great age and immense strength, besides which the antero-posterior far exceeded the lateral diameter of the thorax. I could have removed the lung only by slow dissection, and, having only half an hour for the entire examination, was obliged to leave the lung in position. I could see, however, that it was studded with pale-yellow nodules, varying in size from that of a pea to that of a filbert. I cut off a slice of lung containing one of these nodules, and have since examined it under the microscope. Upon uncovering the liver, I found its upper and anterior surface studded with projections varying in size, and of a color somewhat lighter than that of the surrounding hepatic tissue. Removed the liver, and found these nodules generally distributed throughout the organ. The whole liver was atrophied, especially the left lobe, in the lower border of which were fine specimens of scirrhus degeneration. In the same lobe and same situation, but nearer the longitudinal fissure, I found a beautifully-proportioned cyst one and one-half inches in diameter. Its walls consisted of firm fibrous tissue. It fluctuated but slightly. If I had then known that I would be permitted to take possession of these organs, I should have left the cyst intact for the observation of the Society. I opened it, and there exuded not fluid, but a thick cheesy matter, followed by a jelly-like mass of friable consistence. The cheesy matter occupied one-third of the interior of the cyst, and completely surrounded the gelatinous mass which filled the centre. The gall-bladder was distended by one large calculus. Removed the stomach. I found its internal surface in a condition of chronic hyperæmia, and abundantly covered by a catarrhal secretion. No contents; color dark brown; otherwise normal externally as well as internally. I next sought for the pancreas, in the place of which I found a large solid mass attached to the spinal column. I removed it, together with the spleen, which came with it. Latter organ small and normal. Cutting into what I supposed to be the pancreas, but which was a shapeless mass, lacking the tail of that organ, my knife gave the "cry" characteristic of scirrhus tissue. In the mesenteric fat about it, were curious coils of calcification. Further than this I did not

examine, except to see that the kidneys were normal. I saw that these organs presented the rare combination of scirrhus cancer and hydatid, and finally prevailed upon the friends of the patient to allow me to take them away. I regret that I was forced to leave the right lung. Upon subsequent examination of the contents of the cyst, I found in the jelly of its centre an occasional hooklet, crystals of cholesterine, débris of various sorts. It is then a hydatid cyst in a condition of fatty degeneration. I did not examine the cheesy matter, not deeming it necessary.

"The embarrassing feature of these organs is the condition of the pancreas. What I supposed to be its body and head, upon further examination suggests an enlarged mesenteric gland. I do not find the head of the pancreas. This mass is on the left of the aorta (which, I may remark at this point, is atheromatous and calcified). The superior mesenteric artery plunges into this mass, turns upon itself, emerges half an inch from its point of entrance, and terminates in the calcified loops already mentioned. I have indicated its course by a bit of cord. The splenic artery leaves the aorta (for there seems to be an extremely short coeliac axis) and runs straight to the left. But, while in its normal relation the artery passes along a groove in the upper border of the pancreas, in the specimen under consideration it passes outside the lower fourth of the mass posteriorly. Its left cut extremity, however, lies directly above a tissue which may suggest mesenteric fat, but which, judging from a very brief microscopic examination, I am inclined to think is pancreatic,—probably the remains of the tail of the pancreas.

"On the other hand, the splenic vein, which normally pursues the same course as the artery, but in an opposite direction, coursing below its artery, begins at its splenic end in proper relation to its artery, viz., below it. Its course, however, takes it above the artery, and it finally plunges into and through the very centre of the fibrous mass at least an inch above the origin of the splenic artery. I have indicated the course of both artery and vein by straws. So much for the hints given by these vessels. The main question seems to be, Where is the pancreas? A portion of its body and tail is, I believe, to be seen. But the head has disappeared, and the fibrous mass lies to the left of the abdominal aorta, the proper position of the head of the pancreas being on the right of that tube. The fact that the superior mesenteric artery forms its first loop in the substance of the fibrous mass would seem to be a proof that this mass is an enlarged gland. But in its very centre we find the splenic vein, and at its left border pancreatic tissue. May not this body have taken up the head of the pancreas as well as the splenic vein? Concerning its actual situation in the body of the patient, judging from its relation to the abdominal aorta and such of the pancreatic tissue as we find, it may be taken for granted that it lay a little to the left of the normal site of the head of the pancreas, but that, while a portion of its bulk occupied a plane somewhat above the normal level of the body of the pancreas, its main bulk took the place of the body and angle of that organ. As already mentioned, the splenic artery at its left extremity lies upon pancreatic tissue, and immediately in connection with the tissue was the spleen, which I removed and left behind. This residue of the pancreas appears to extend directly into the fibrous mass at the right. I have refrained from mutilating the mass beyond the original cut, thinking it would be more instructive if I left the specimen as it is, for the inspection of the members, hoping it would then be referred to the Committee on Morbid Growths for further examination.

"After I had gained the unexpected permission to take the organs away, I sewed up the hydatid cyst with its

contents and restored it to a condition which will sufficiently indicate its original appearance.

"The small nodule which I removed from the lung, I have examined under the microscope, and find its structure similar to that presented by the nodules in the liver. The combination of conditions shown by the specimens is rare. We have cancer of the lung, cancer and hydatids in the liver (I cannot say there was no hydatid in the right lung), and a condition of the pancreas which demands further study. In regard to the cyst, I would call attention to the fact that it existed in the body of a person eighty-one years of age, which is very unusual. According to Budd, hydatid tumors are so rare in the aged that he limits them to the years of life between six and fifty. The oldest of Frerichs's hydatid-patients was sixty-five. Davaine finds this form of tumor between the ages of twenty and forty. Single hydatid cysts are also very rare in the left lobe of the liver.

"I will add merely that the specimens have been kept in a fifteen-grain solution of chloral, and have, I think, retained their original color, consistency, and freedom from odor more perfectly than would have been possible in any other preservative."

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a conversational meeting held Wednesday, December 23, 1874, at 8 o'clock P.M.,

THE PRESIDENT, DR. W. L. ATLEE, in the chair,

Dr. O'HARA exhibited a patient he had attended some six months previous with an injury about the cervical vertebræ, supposed at the time and for two weeks after to be a fracture of the odontoid process. That opinion was afterwards given up, but at this time some trouble remains which he considers to have been caused by laceration of the atlo-axoid ligaments. Opinions as to his present condition differ, and he introduced the case as one in which there was some obscurity, and would like to have an expression of opinion from the members present. It was one of those cases where opinions are given in court diametrically opposite, and lead to prejudice against the profession.

Prof. H. H. SMITH, after an examination of Dr. O'Hara's case, thought the odontoid process could not have been broken. No authenticated specimen of such fracture had ever been found, and the few cases reported were from extreme violence; this patient, from his present symptoms, had suffered probably a fracture of the fourth spinous process of the cervical vertebræ, and he had also an enlarged bursa, or movable body, under the muscles and fascia of the back of the neck.

Dr. W. L. ATLEE, after an examination of Dr. O'Hara's case, said that he did not think it a fracture of the odontoid process. The small protuberance was too low down to indicate an injury at that point, being full one and a half inches below the axis vertebræ. Neither could he make out a fracture of the spinous process of any of the cervical vertebræ. He thought the primary symptoms may have resulted from shock, and the subsequent ones from inflammation and its results, and that the small movable knot on the back of the neck was not a portion of detached bone, but an enlarged bursa.

Dr. O'HARA asked if any gentleman could give his experience in monobromide of camphor. In one or two cases of approaching delirium tremens in broken-down subjects, he administered it in three-grain doses every two hours, and after a few doses seemed efficacious in inducing sleep.

Dr. H. C. WOOD, in reply, said that our knowledge of the action of this drug is very limited and uncertain.

Dr. J. M. BOISNOT then read a paper,—subject, "A Case of Purpura Hæmorrhagica requiring Transfusion."

Dr. WOOD said he was interested in the paper, and asked Dr. Boisnot his grounds for so referring the purpura to a fall.

Dr. BOISNOT considered that such an accident might be referred to as a remote cause for want of a better; the child had never been ill during the interval.

Dr. ATLEE asked Dr. Boisnot whether the full amount of four ounces of blood had been introduced, and what was the time consumed in injecting it.

Dr. BOISNOT replied that the amount transfused was four fluidounces, and the time about two minutes.

Dr. ESHLEMAN asked whether there was much blood lost by epistaxis.

Dr. BOISNOT said there were about ten attacks of epistaxis.

REVIEWS AND BOOK NOTICES.

A SERIES OF AMERICAN CLINICAL LECTURES. Edited by E. C. SEGUIN, M.D. Vol. I. No. 1.

This lecture, by Professor Louis A. Sayre, on Diseases of the Hip-Joint, is the commencement of an indefinite series, whose number we suppose will be governed by their success, in imitation of the famous Alkmann Sammlung Klinischer Vorträge. Of course, no better selection could have been made than that of Professor Sayre to write the lecture upon hip-joint disease; but, as all the names as yet announced as contributors are those of New York physicians, we are tempted to suggest to Dr. Seguin that Gotham, though it has produced three wise men, is not America, and that if he really desires to do justice to American medicine and to do all in his power to secure practical success to his undertaking, he should widen his horizon. The typographical appearance of the lecture is very creditable to its publishers, whose efforts we trust will be sustained by the profession.

THE MICROSCOPE AND ITS REVELATIONS. By WM. B. CARPENTER, M.D. Fifth Edition. Philadelphia, Lindsay & Blakiston, 1875.

We are always glad to see an American imprint upon an English-printed book, as we take it as an indication that the author has got, or is to get, at least some compensation from his American readers. Either because the book deserves it or because we are influenced by natural prejudices towards the favorite source of our early knowledge, we deem this work of Dr. Carpenter's the best general work on microscopy in the language; and a somewhat cursory examination of our old favorite in its new dress indicates that it has been in all respects brought thoroughly up to the times.

REPORT OF THE HEALTH COMMISSION OF THE STATE OF NEW JERSEY, 1874.

The pamphlet before us is one of the many indications that our various governments are beginning to appreciate the value of State medicine. The Commission was a preliminary one, and the result of their labors has been to bring forward a proposed law, modelled after that of Massachusetts, for the formation of a State board of health. The arguments they offer in favor of this or some similar enactment are unanswerable except by the passage of the law, which we trust will take place this winter.

EATING FOR STRENGTH. By M. L. HOLBROOK, M.D. New York, Wood, Holbrook & Co., 1875.

The chief value of this book, if value it have any, consists in the receipts contained in it. As our cook has

not found time to test these as yet, we offer no opinion concerning them. The book, however, comes in such questionable form that we do not think the profession will be committing hari-kari in practising towards it total abstinence. In justification of this remark, we would state that the title-page informs us that the author is the editor of *Herald of Health*, Parturition without Pain, etc.

GLEANINGS FROM OUR EXCHANGES.

MANUAL DILATATION OF THE OS UTERI AS A MEANS OF INDUCING PREMATURE LABOR (*Boston Medical and Surgical Journal*, February 4, 1875).—Dr. A. D. Sinclair strongly recommends the use of the hand of the obstetrician as a uterine dilator, in preference to sponge tents or other instrumental means, for the following reasons: 1. The hand is always available. 2. It can be easily governed. 3. Wherever a sponge tent or rubber bag can be inserted, the finger may be introduced. 4. The hand and the brain of the operator being in constant sympathy, giving him the precise idea of the condition of the parts, he is enabled to regulate the force necessary to effect dilatation. 5. Artificial dilators frequently require manual aid to keep them in place. 6. As the skilled surgeon, in the process of certain operations, finds greater safety in the use of the fingers than the knife, so may the obstetrician substitute his hand for artificial means as often as practicable.

In nine cases of convulsions, uterine hemorrhage, placenta prævia, vomiting, etc., in which this method was used, seven recovered and two proved fatal. The process of dilatation in a primipara, seven months advanced in pregnancy, is thus described:

The patient was chloroformed. The hand being oiled, a finger was passed into the orifice of the vagina, which was small; but after a short time it yielded to gentle pressure sufficiently to admit the whole hand. In the same manner the entrance into the os uteri was effected. Although the opening was so small as not to admit the point of the index-finger, the exertion of gentle force effected an entrance. Waiting until the cervix relaxed, another finger was then passed alongside the first, held until further relaxation ensued, when a third finger was insinuated, and so on until the five fingers, wedge-shaped, were all engaged within the cervical cavity. By gentle force, patiently sustained, the whole hand could now be passed into the cavity of the uterus, but it was allowed to remain in the cervical cavity until complete relaxation had taken place. This important point should be borne in mind, for on it greatly depends the success of the operation. The child was turned and extracted, and is now living. An hour and a half was occupied in the process, with no evidence that the soft parts had suffered contusion. The only uterine contraction observed was while the hand was in the womb; and deep anæsthesia was required to overcome it.

SURGICAL TREATMENT OF CAVITIES IN THE LUNGS.—The Berlin correspondent of the *Irish Hospital Gazette* (February 1, 1875) has, in conjunction with Dr. Koch, made a number of experiments on the effects of the injection of a strong solution of iodine into phthisically diseased lungs. The solution used was one part iodine and one part iodide of potassium to twenty parts of water. In no case was the operation followed by any unpleasant reaction; in quite a number of cases the temperature, which before the operation was that of hectic fever, sank immediately afterwards to normal, and remained there for several days. None of the patients complained of any subsequent pain, but in no

case was the phthisical tendency arrested. The disease seemed to run its ordinary course, and whenever a post-mortem examination was made the affected lung-tissue showed the evidence of having been influenced by the injection.

STERILITY AFTER LITHOTOMY.—Mr. W. T. Teevan has published (*Trans. Clinical Society*, vol. vii. pp. 179, 180; and *Trans. Path. Society*, vol. xvii. p. 186) four cases of this in males operated on by the lateral operation for stone. The stones removed from the bladders do not appear to have been large, and the subjects of operation were all young, two being infants. Mr. Teevan explains it by the operation, as usually performed, involving a laceration of the floor of the prostatic urethra, the ejaculatory ducts being torn across, or the orifices plugged with inflammatory exudation in the process of healing.—*Student's Journal*.

NOTES AND QUERIES.

LOUISVILLE, WINSTON COUNTY, MISS., February 26, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

MR. EDITOR,—I see in a number of your journal (Feb. 20) an article headed "Sulphate of Quinine in Premature Labor," by Harvey L. Byrd, M.D., etc., etc. I think the doctor could with equal propriety have headed the article "The Use of Purgatives in Premature Labor." In the summer of 1832, after attending one course of lectures in Transylvania University I attended a lady who had miscarried several times at about the third month. I gave her pills of rhubarb and aloes so as to keep her bowels gently open; she kept up all the time, did her house-work, and went her full time, had an easy labor, and a healthy child. I think the doctor's pills much better than my pill was, which may have had some soda in it, but not certain. The bromide of potassium and chloral was, I presume, a good auxiliary, but she might have done quite as well without quinia.

Yours, etc.,

E. FOSTER.

At a special meeting of the College of Physicians of Philadelphia, held Saturday, March 6, 1875, the following resolutions were unanimously adopted:

Resolved, That the Fellows of the College of Physicians have, with sincere sorrow and unusual emotion, heard of the death of Dr. George W. Norris, the Vice-President of the College, which occurred on March 4, after a long and painful illness.

Resolved, That, while submitting with reverence to the decree of Providence depriving them of one of their most esteemed associates, they cherish the consolation that regret for the loss sustained in his decease is accompanied by imperishable recollections of his personal worth.

Resolved, That the Fellows of the College have been deeply impressed by the courteous and gentle bearing of their late Vice-President, by his honorable conduct and high tone in his relations with his associates, by his studious avoidance of everything incompatible with the dignity of the profession of medicine, and by his entire freedom from all invidious personal assertion, while fully appreciative of the obligations of duty.

Resolved, That they regard his life and professional career as models worthy of imitation, and as eminently illustrative of the principles which have animated the conduct of the great and the good men of our profession.

Resolved, That his memory will be ever venerated for his whole-souled devotion to the interests of the profession, for his faithful maintenance of them, and for his life-long endeavor to promote the advancement and efficiency of that profession by his personal contributions.

Resolved, That the Secretary be instructed to transmit a copy of these resolutions to the family of Dr. Norris, and that they be published in the medical periodicals of this city.

JOHN H. PACKARD,
Secretary.

MEMORANDUM.

No changes of stations, etc., of officers of the Medical Department, U.S. Army, for the week ending Monday, February 8, 1875.

SATURDAY, MARCH 20, 1875.

ORIGINAL COMMUNICATIONS.

THE MANAGEMENT OF HEAD-LAST LABORS.

Read before the Philadelphia County Medical Society, January 13, 1875,

BY WILLAM GOODELL, M.D.,

Clinical Professor of the Diseases of Women and Children in the Hospital of the University of Pennsylvania, President of the Philadelphia County Medical Society, etc.

LABORS in which the head is born last are the bugbears of the physician; and well they may be, for Atropos, and not Lucina, presides over them. The tediousness of the labor, the probable ascent and possible fracture of the arms, the impaction of the head, the peril in which the child's life is placed, and the very disagreeable chance of breaking the neck, or, indeed, of leaving the head behind, present in their aggregate a very unwelcome group of complications. The chief dread of the physician is, however, the death of the child, and the length of the labor.

The causes of foetal death in this form of labor are manifold. But, what is worse, they accumulate in proportion as labor advances, and in the end act in concert. The first, in regard to time, comes from the irregularity of the presenting part, and consists in the escape of all the liquor amnii as soon as the bag of water breaks. The next is the delay attending the expulsive stage. The other causes lie in ambush until the breech is born, and then combine with the former in making a deadly assault upon the child's life. These include the compression of the cord and placenta, the partial detachment of the latter, the embarrassment to the uteroplacental circulation from the lessened size of the womb, and, finally, what is not uncommon, the long pauses between the pains. But there is yet another danger, not so generally known, which is, perhaps, the most common cause of death before delivery, and of feeble vitality or of death after delivery. When the placental circulation begins to flag, the child, unless at once delivered, keenly craves oxygen. Urged on by this air-hunger, it makes premature respiratory movements. But, since air cannot gain access to its nostrils, the child draws into its lungs the bloody and mucous discharges of the maternal passages. These foreign bodies so plug up the bronchia that the child is very liable to die either at once, from asphyxia, or within a few days after birth, from lobular pneumonia,—viz., atelectasis pulmonum.

From these causes the foetal mortality in head-last labors is large; so large as to be an opprobrium to the profession. From the statistics of fourteen of the most skilful of British obstetricians, Churchill shows that they lost very nearly one child in every three. In ordinary breech-cases Hodge rates the average of still-births at thirty-three per cent. According to MM. Capuron and Cazeaux, in the more difficult cases from sixty-six to seventy-five

per cent. perish. Said the late George T. Elliot (*Obstetric Clinic*, p. 347), "I always regret to meet a pelvic presentation in my practice, for fear that the child may not be born alive." In more or less vivid language, the testimony of this very distinguished obstetrician is sustained by all the authors of our text-books. Since, now, these statistics represent the experience of the most skilled specialists, of eminent teachers, of men who, by a large private and hospital practice, reached an unrivalled dexterity in their branch of the profession, it stands to reason that in the practice of the profession at large the average number of head-last still-births must be very much higher. For this mortality fifty per cent. is, I think, a very low estimate. But, mind, in the above statistics no account whatever has been taken of post-partum deaths from enfeebled vitality, or atelectasis pulmonum, so common in the infant after this kind of labor. This loss in itself is so large that it must not be overlooked. Since, therefore, pelvic presentations occur about once in every fifty cases of labor, it follows that in every thousand labors a practitioner attends he will, from this cause alone, meet with at least ten still-births and several deaths within a few days after birth.

In view of these facts, the objects of this paper will be to search out the best means for shortening the duration of this kind of labor, for preventing the death of the child, and, as a conjoint consequence, for giving the physician a greater confidence at the bedside of his patient. These ends can, in my opinion, be best attained by classifying pelvic presentations under the head of preternatural labors. For, since a name misleads, if we include them under natural labors, as is customary, we shall be less likely to render the often-needed help.

For shortening the first stage of head-last labors I have found nothing equal to the hydrate of chloral. Given every half-hour in doses of from ten to fifteen grains it promptly relaxes the most rigid cervix. In head-first labors the early rupture of the membranes usually hastens on the process of dilatation; but in head-last labors this means should never be employed. For obvious reasons it is of vital importance to keep the membranes intact until the os is fully and wholly open. If after the completion of the first stage of labor there is much delay in the descent of the breech, no better directions can be observed than those given by Barnes. The chest, shoulders, arms, legs, and sometimes the head of the child, all act conjointly in forming the base of a wedge, whose apex is represented by the breech. The apex engages, but the base, being more bulky than the brim or the lower segment of the womb, forbids further descent. By bringing down one leg, and preferably the one nearer to the pubic arch, this wedge is broken up, and the further progress of the labor placed under the control of the physician. He should, however, make no further traction on this leg unless it is loudly called for, and then only during a pain, lest the arms should become extended. From a pretty large experience, I can confidently recommend

this operation in all cases attended with delay. Nor should it be for a moment postponed after the heart-beats of the child become feeble. When the breech has descended so low as to preclude a resort to this operation, then, of course, the canonical methods of traction on the groins may be employed. But I really cannot understand why the gentle use of the forceps on the pelvis of the child is deemed more hurtful than that of the blunt hook in its groin. The pain that delivers the breech should be supplemented by traction or by supra-pubic propulsion, so that the arms and shoulders may also, if possible, be expelled at the same time. A loop of the cord must then be drawn down, so that its spirally-coiled vessels may not be constricted by being straightened out.

The breech being born, the uterine and abdominal muscles are in a great measure shorn of their expulsive power, and that at a time when most needed. The life of the child being now imperilled, its rescue is the next important consideration. From the mode of its death,—viz., from asphyxia,—it is plain that a prompt delivery is the only life-saving factor. Delay here means death. One of five minutes' time may be one minute too much. Hence there must be no waiting for the manifestation of such danger-signals as feeble pulsations in the cord, or convulsive jerks of the limbs; no loitering for a pain to begin, for the arms to come down, or for the head to become moulded. The proverb *quieta non movere* has here no application whatever. The physician should urge the woman to bear down; but if these efforts prove unavailing, he must hasten to bring down the arms, and at once proceed to the forcible extraction of the child. I say this advisedly, for, although our text-books teach otherwise, I am sure that in nine-tenths of breech-labors it is inaction and not traction that kills the child. Fettered by sentimental conservatism, or by an allegiance to traditional technics, the physician folds his arms, when, had he as many hands as a Hindoo deity, they should all be nimbly at work. Never shall I cease to regret my first breech-case of labor, in which, fearful of breaking the canons of obstetrics, and the child's neck as well, I let the only child its mother ever bore die before my eyes. So needful to the welfare of the child do I deem its speedy delivery to be, that were an arm so impacted as not to be safely released without a probably fatal delay, I should not hesitate to break it, or, at least, to run the risk of breaking it. Nor do I stand alone in advocating this heroic treatment. It is upheld by such excellent authorities as Braun* and Schroeder.† In such emergencies, however, as M'Clintock‡ and Bouchut§ have pointed out, and as I can bear witness, it is usually the clavicle that snaps, and not the humerus. In those rarer cases in which the humerus is broken, the fracture is often partial,—viz., of the green-stick kind. By the aid of thin pasteboard splints and of straps of adhesive

plaster, such injuries heal so readily and with so little deformity that they should weigh as trifles when life is at stake. In cases of pelves known to be ample, I can conceive of its being perfectly justifiable to follow Giffard's|| and Frierie's¶ plan of dragging the head through with the impacted arm extended above, rather than that of losing golden minutes in liberating it.

Supposing, then, that the trunk and arms are born, and the head, gripped by the brim, alone remains for extraction, is the forceps to be resorted to? I answer, "No;" for, although this instrument is handy enough when the head is at or near the outlet, in high operations its application is attended with so many difficulties that too much precious time is lost. The problem being to get the child's head out as soon as possible, the only factors for its solution are limited to supra-pubic pressure upon the head, and to traction on the body. But the former is not by itself trustworthy; while, as to the latter, the great majority of physicians labor under the idea that the neck of an infant cannot bear much traction. "Would you be willing," they triumphantly ask, "to lift up by its head an infant just dressed and lying in the nurse's lap?" "Would you," it may be retorted, "be willing to make as much traction upon the lower jaw of a newborn child as you have just made in flexing its head? or would you compress its head with the forceps as viciously as you did a few minutes ago?" For obvious reasons, I object very decidedly to the nursery game of lifting a child by its ears to make it "see London." But, were one of my children drowning, I should not hesitate to grapple for its naked body with a boat-hook, or to pull it out of the water by the hair, by the ear, by the nose, or by any prehensible portion of its body, regardless of any local injury it might sustain. Nay, were its limbs, like those of canny James Lambert (Charles Reade's aquatic hero), weighted down by the death-grips of some twenty other drowning persons, I should run the risk of breaking its neck in my frantic efforts to raise its chin above water-level. Now, a child presenting by the breech is in precisely this plight. It is under water, weighted down by the grip of the bony canal; it is drowning; and to any one drowning help must be sped,—help at all hazards.

The ancient Romans recognized this danger, and, as I believe, applied the only remedy for it. According to Pliny (*Historia Naturalis*, lib. vii. cap. viii.), they called all persons born in this manner, Agrippas. This name still puzzles etymologists; Aulus Gellius and Pliny himself derive it from *aggre partus*,—viz., *born with difficulty*,—but this is stoutly contested by others. With diffidence, I would suggest it to be either a derivative from *arripio*,—to snatch away; to take by force,—or a compound from the Greek word *Γρίψ*,—a griffin, or fabled winged monster with four sets of talons,—from which our own word *grip* is derived. Thus interpreted, the name Agrippa is descriptive of the mode

* Philadelphia Medical Times, February 20, 1875, p. 325.

† Manual of Midwifery, Am. ed., 1873, p. 184.

‡ London Obstetrical Transactions, vol. iv. p. 184.

§ Maladies des Nouveaux-nés, Paris, 1862, p. 854. See, also, Irish Hospital Gazette, January 1, 1875, p. 2.

|| Cases in Midwifery, Case LXVIII.

¶ Journal Général, vol. xxiii. p. 460.

of birth, and means one snatched away, or taken away by force. But such a mode of delivery necessarily hinges on the tensile strength of an infant's neck, and this will, therefore, next engage our attention.

The adult neck is strong enough to bear the immense strain of the gallows-drop without sustaining a luxation of the atlas on the axis. Criminals executed in this manner usually die from suffocation. What holds good with adults holds good relatively with children; and it is wonderful what a strain their necks will safely bear. From experiments made adversely to version in narrow pelves, and, therefore, the less likely to overrate the tensile strength of the foetal neck, Matthews Duncan concludes (*British Medical Journal*, December 19, 1874, p. 763) that the neck of a dead child can, at term, sustain the average weight of one hundred and five pounds before the spinal column gives way, and one of one hundred and twenty pounds before the body parts from the head. These averages are, I think, under-estimated rather than over-estimated, for out of the four foetuses experimented upon, two of them weighed under six pounds; and the other two, weighing, respectively, seven pounds and seven ounces and eight pounds and fifteen ounces, sustained each weights of one hundred and forty-one pounds and one hundred and thirty-six pounds before decapitation took place.

In a difficult breech-case to which Joulin was called in long after the child was dead, he delivered the woman, after employing for twenty minutes a steady traction-force of one hundred and two pounds, made by a noose thrown around the neck of the child (*Traité complet d'Accouchements*, p. 1062). In conducting a series of experiments to determine the value of version in narrow pelves, he delivered with unbroken necks (p. 1050) the heads of three dead infants after putting on their feet a steady force, respectively, of one hundred and twenty-five, one hundred and forty-five, and one hundred and forty-eight pounds. But it must not be forgotten that these experiments were made upon dead children, and that the tensile strength of a living child's neck is presumptively greater. Again, Joulin also proved with his dynamometer that, without any purchase for the feet, and by pulling merely with the muscles of the arms, a robust man can exert on the forceps a maximum weight of one hundred and thirteen pounds. From analogous experiments made by Delore, a force of only one hundred pounds was reached (p. 1065).

Now, with the woman lying on her back and myself standing in a stooping posture before her, I have repeatedly delivered living and lusty children by putting on their necks all of my weight possible in that position. By grasping a cane in an analogous manner, and forcing it down on Fairbanks's scales, I find that one can for thirty seconds exert a steady downward pressure of about ten pounds more than half the weight of one's body. That is to say, I, who weigh one hundred and ninety pounds, can, for a very short time, exert a steady power of one hundred and five pounds. By throwing my weight suddenly upon the cane in quick jerks, I find that

I can tip the beam at one hundred and thirty pounds; and this great weight I certainly have on several occasions thrown on infants' necks. Yet I can confidently say that, notwithstanding this severe strain upon the spinal column, I have broken it but once, and have never failed to save the child whenever its birth was completed soon enough. Should much disproportion exist between the size of the head and the capacity of the brim, it is emphatically a case of "neck or nothing;" and the operator must not shrink from promptly using very great force,—a force, indeed, only just short of detraction. But I do not believe it possible for a physician even to break the neck of a mature child, much less to behead it, if he applies a steady traction-force in the manner above described,—viz., by pushing the neck and body of the child backward and downward, just as he makes downward pressure on the lock of the forceps. Not even when the infant is immature should the efforts of the physician be hampered by the fear of sudden decoliation. For the spinal column always yields before the skin and muscles part, and the consequent jerk and the immediate elongation of the neck will give timely warning when to use less force, or, the child being now dead, to end the labor by craniotomy or cephalotripsy. Far better is it, in these emergencies, to kill in attempting to save than to kill by cowardly inaction.

I once saw the strength of the child's neck put to a crucial test, and the result amazed me. I frankly confess that had I not been an eye-witness I should have been a doubter. It was a case of a primipara with a flat pelvis and a large but putrid foetus. After craniotomy had been performed, a further obstruction to delivery lay in the bloated chest and belly. Before this second complication was recognized, each one of the four physicians present, including myself, took his turn at the forceps. From a natural rivalry, the traction thus necessarily made upon the neck of the foetus by three of us in succession was no child's play. But that made by the fourth gentleman, a distinguished member of this Society, exhibited so much power and originality that I shall here describe it. He turned the woman over on her side, brought her hips to the edge of the bed, and applied Hodge's forceps. He next carefully tucked a sheet around the lock of the instrument, removed his shoes, sat in a chair, and placed one foot across the perineum, the other across the vulva. He then grasped the handles, straightened out his body, and pulled with all his might and main, making every muscle in his body quiver with the effort. Yet, in spite of the enormous strain brought to bear upon the neck of the child, it was simply lengthened out, but not broken. The cranial stump was brought down to the outlet, but it literally sprang back at every intermission of the traction. This behavior of the head, or rather of what was left of it, was in fact the first clue that led to the discovery of the obstructive size of the child's body.

Although these facts show the wonderful tensile strength of the foetal neck, yet, in order to extract the head with a minimum of traction-force, it is of

great importance to exert the power to the best mechanical advantage, and to grade it to the resistance. This brings me to the mode of making traction; but in order to understand the subject fully it will be first necessary to study the configuration of the fetal head, and the mechanism of its extraction. In so far as breech-labors are concerned, the foetal head is made up of the frustums of two cones meeting in one common base. One cone is that portion of the head behind the biparietal circumference; the other consists of that portion in front of the same plane. I shall distinguish them by the names of the "fore cone" and the "hind cone." Looking from below upwards,—viz., from the base to the vault,—the head is also wedge-shaped. This I shall call the "wedge." Now, it has been found over and over again, except in those rare cases of uniformly contracted pelvises, that, when an infant is pulled through the brim by the feet, the shorter diameter of the fore cone—viz., the bitemporal diameter—tends to pass directly between the sacral promontory and the pubic symphysis, and the hind cone, together with the large biparietal diameter,—viz., the base common to both cones,—to pass to one or the other side of these two osseous points. The shorter the conjugate diameter the more inflexible is this law. The head thus makes its first movement of descent in an unflexed condition, but there is usually plenty of room in the bisiliac diameter for the occipito-frontal diameter to pass. Again, the distance measured from the chin to the nipped points of the head—viz., the ends of the bitemporal diameter—being less than the distance from the occipital protuberance to the same points, the chin can hardly ever catch over the iliac edges of the brim. Theoretically, the extension of the head by the arrest of the chin over any point of the brim is a possible accident, but practically its occurrence is so rare that it may be left out of consideration. Mauriceau saw but one case; in many thousand labors Madame Lachapelle did not meet with one; nor did Velpeau, who, however, notes one occurring in the practice of Leroux, and another in that of Eckardt. Joulin states (p. 559) that he not only never met with this complication, but that he in vain repeatedly tried to bring it about by forcing the back of the child into the hollow of the sacrum. The cause of this almost invariable adjustment of the occipito-frontal diameter to the transverse diameter of the pelvis is the round and hard surface of the occiput, which glides off to one side of the sloping promontory. The head, therefore, passes the brim in the transverse position and in an unflexed condition. But when it is brought into relation with new pelvic diameters, the greater friction of the broader and harder surface of the hind cone brings about the movements of flexion and rotation.

Granting these premises, it follows that the occipital protuberance is far more likely than the chin to hook over the edge of the brim, and that flexion is an undesirable movement while the head is passing through the conjugate. The rule, therefore, to make flexion at this stage of labor, by passing two fingers into the mouth or on each side of the

nose, is not only a piece of meddlesome midwifery, but it entails the loss of much traction-power, and is a sheer waste of very precious time.

According as the pelvis is of average size or is narrowed in its conjugate diameter, I adopt two modes of extracting the wedge-shaped head; but the one that I shall first describe is the one that I invariably first employ. The woman may retain the lateral position, but, for reasons to be hereafter given, I much prefer her to lie on her back, with her hips brought to the edge of the bed. In a brim narrowed in its conjugate, the promontory is usually sharp and projecting. The sacral side of the after-coming head tends, therefore, to be bent in by this osseous point and to become fixed by it. Hence the extrication of the head as a whole can take place only when its pubic side revolves around the promontory and glides down over the smooth under surface of the pubic symphysis. Bearing this fact in mind, it is important that the sacral side of the head should become fixed at a point as high up as possible,—viz., as near to its vault as possible. To gain this end, the physician, after grasping the nape of the neck with one hand, and the ankles with the other, should make his first movement of traction in the axis of the outlet, for then the pubic side of the head will be tilted away from the inlet, while the sacral side will proportionately descend over the edge of the promontory, and affront the brim. This canting of the head can be very materially aided by an intelligent assistant, who will make very firm backward and downward pressure with both hands, through the now flaccid abdominal wall, upon the vault of the head. By this manœuvre the promontory is made to indent the sacral side of the head at a point still higher up, and nearer to the vault; hence the arm of the lever, measured by a line drawn from the base of the skull to this fixed point, will be correspondingly lengthened,—a mechanical advantage not to be overlooked. If now, *without for a moment relaxing, but rather increasing, the original traction-force*, its direction be reversed, and the body of the child be swept backwards upon the coccyx, the neck being also forced downward and backward into the hollow of the sacrum, the sacral side of the child's head becomes deeply bent in, and the pubic side is made to revolve around the promontory and descend with the least expenditure of traction-force. In other words, the head is warped around the promontory. Should the neck be so short, or the pelvis so deep, that the physician cannot well grasp the nape, he may loop a thin muslin sling over it, and draw on the ends, which should meet in front of the chest.

Whenever this mode of traction fails to release the head from the grip of the brim, or the difficulty lies rather in the size of the head than in the narrowness of the pelvis, I have, on several occasions, succeeded by a pump-handle movement. Made with a steady and an unremitting traction, it will cause each side of the wedge-shaped head to descend alternately. The range of oscillation should extend from the axis of the outlet anteriorly, to very firm pressure on the coccyx posteriorly. With a sharply-defined promontory this up-and-down movement

does not ordinarily succeed, unless the parietal bone has been broken in or greatly depressed as a whole, and not simply indented. Otherwise, the sacral side of the head is held fast, and the pubic side will then librate around the indented, and therefore fixed, point, merely rising and falling, without any onward progress whatever. But in the breech-cases ordinarily met with, in which the sacro-vertebral angle is usually round and knobby, or in those of large heads and average pelves, this pump-handle movement will be found a very precious expedient.

To either method supra-pubic propulsion by the hands of an assistant is a very important adjuvant. It can with safety be made to any extent, and will greatly lessen the amount of traction-force necessary for delivery. As soon as the head has passed the brim, which it does usually with a distinct jerk, flexion and rotation spontaneously take place, and the line of traction must then be changed to that of the outlet. When finally the head is about to clear the bony canal, the body of the child should be raised up in front of the pubes, according to Hodge's plan, and traction made directly upward in a line at a right angle to the mother's body. This final method of traction augments the flexion of the head, and obviates the necessity for putting two fingers into the child's mouth. When the face presses on the soft parts, two fingers passed up into the rectum will still further increase the flexion of the head, and will serve to protect the perineum from injury.

To sum up, then,—the mechanism of a forced delivery consists in propulsion and three movements of unremitting traction. That failing, in propulsion and a pump-handle movement of traction. Of the three movements of traction, the first is made in the axis of the outlet, the second in the axis of the inlet, and the third in the curve of the obstetric canal.

I have been somewhat minute in these directions, because physicians, by continuing the backward traction long after the head has slipped past the brim, sometimes fail to deliver, and because by this faulty traction the chin hooks over the perineum and badly tears it. One word with regard to the perineum: In head-first labors due time can generally be given for its complete dilatation; but in head-last labors even seconds are too precious to be thus wasted. If, therefore, air cannot be communicated to the mouth or to the nostrils of the child through the gutter made by the physician's fingers, he must disregard the consequences to the mother and forcibly deliver by traction, or, this failing, by the forceps. Should the perineum be torn, as it usually will be in a fat primipara, a perfect union of the wound may be confidently looked for from the immediate introduction of wire sutures.

In both the previously-given modes of extraction I prefer the woman to be on her back, with her hips brought slightly over the edge of the bedstead, and each knee supported by an assistant. My reasons for this position in preference to the lateral one are: that the propulsive pressure is then more efficiently given either by the hands of a third assistant, or by the free hands of the two assistants; that since the power thus applied resolves itself into a question

of weight and not of strength, very few physicians, while bending forward in front of the woman thus placed, can exert a steady force of one hundred pounds upon the neck of the child; and, finally, that the upper hand of the physician can then force the neck into the hollow of the sacrum and thus make the line of traction somewhat behind the axis of the superior strait.

In conclusion, let me say that, since adjusting all sentimental considerations for the child's neck to a sliding scale of pounds avoirdupois, and since adopting the foregoing methods of delivery, I approach a case of head-last labor with an assurance of success such as I never had before, and such as I wish to impart to those who lose heart the moment the examining finger discovers that the head is not the presenting part.

A CASE OF BASILAR MENINGITIS IN WHICH THE OPHTHALMOSCOPE APPEARANCES (CHOKED DISK) WERE OBSERVED ONE MONTH BEFORE DEATH.

WITH THE ACCOUNT OF THE POST-MORTEM EXAMINATION.

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THROUGH the courtesy of Dr. T. E. Satterthwaite, Curator of the Presbyterian Hospital, and Dr. James L. Banks, Attending Physician, I am enabled to report a case which derives its chief interest from the careful post-mortem examination of the brain that was made by Dr. S. On the 24th of November, 1874, I was asked to see a young girl in Cherry Street, who was said to be suffering from pain in the eyes and ears. I found an emaciated but tolerably strong girl of about fourteen years of age, sitting up, but complaining of headache and of occasional pains through her ears and eyes. Her hearing was good, and her mental powers were unimpaired. She could read the type of a book of rather coarse type, so that at a rough estimate, having no test type with me, I concluded that her vision was at least one-half, $\frac{2}{3}$, or perhaps even $\frac{3}{4}$. On examining the bottom of the eyes with the ophthalmoscope, I found the media perfectly clear, the choroid and retina sound, but the optic papilla swelled, the veins large and tortuous, and the arteries small. Both nerve-entrances were in the same condition. There was no intolerance of light. The appetite was impaired, and the general nutrition was also in a poor state. The patient had an occasional chill, and had been gradually getting into the present state for about a month. The drum-heads showed no morbid change.

My diagnosis, made in the presence of Mr. Kreekorian, student of medicine, was descending optic neuritis from basilar meningitis. She was placed upon bromide of potassium, quinine, beef-tea, milk, etc.

The patient was living in a very small room, surrounded by all the other members of the family, some five or six in number, and she was therefore

removed to the Presbyterian Hospital, where she died on the 20th of December, or about twenty-four days after I made the ophthalmoscopic examination. The general symptoms and course of her case after admission to the Hospital, as furnished me by the Attending Physician, Dr. James L. Banks, were as follows:

S. H., æt. 13; born in Syria; single; no occupation; father Armenian and mother Greek. Good family history; says she was perfectly well until two months ago, when she began to have severe paroxysms of headache and vomiting, which rapidly increased in frequency and intensity. During past month, according to the statement of her friends, she has had epileptiform convulsions, strabismus, and attacks of blindness. In spite of the administration of bromide of potassium, the convulsions have been more frequent and more severe of late.

On admission, patient is fairly nourished; slightly anæmic. Dark hair and eyes, and fair skin. Complains of very severe pain in head, chiefly in frontal region and in back of neck. Says that the pain is quite constant, but is much more severe at some times than at others. The light hurts her eyes, and blue glasses are worn as a protection. Says that sometimes her vision becomes very "dim;" at present it appears to be good. Pulse and temperature normal; skin and muscular system natural; pupils widely dilated, but responsive to light. Appetite very poor. Bowels costive. Patient feels able to be up and dressed during the day.

There was no special change in the condition of the patient until the 5th of December, when she had nine epileptiform convulsions during the morning, in quick succession, and slight spasms almost continuously during the afternoon and night. On the 6th she was quiet and partially unconscious, moaning and complaining of headache in frontal region. Occasionally strabismus was noticed. Bowels constipated. The following day, the 7th, she sat up and dressed, and said she felt much better, complaining of no pain. This continued until the 9th, when she had again great pain in head, and vomited frequently, but there was no convulsion until 12 P.M. of same day.

Morning of the 10th she was quiet, but unconscious. On the 11th and 12th had frequent spasms, great pain in head and neck, and unconscious part of time. Paralysis of lower extremities then appeared, with incontinence of urine and fæces; pupils were unequally dilated.

No change in condition on 13th and 14th. On 15th, spasms less frequent; pulse is losing strength, and she is emaciating rapidly.

On the 16th, no spasms; complained of headache; began to refuse nourishment, having taken it well hitherto; pulse very weak. It was then observed that patient was blind, and partially deaf. She continued in this condition until her death, three days after.

The treatment consisted in the administration of bromide of potassium, five grains every four hours, increased to five grains every three hours, and combined with iod. pot., etc., etc.; blister (cantharides) to back of neck; ice-bag applied to head (also to spine, without good effect, and discontinued). Mag. sol. morph., \mathfrak{M} iv hypodermically, to control restlessness and spasm, was given twice. Bowels were moved by enemata. Extra diet, milk, beef-tea, etc., etc., was ordered, and, although there was some apparent improvement at first under this treatment, the patient gradually lost strength, emaciating rapidly, and she died very quietly at 3 P.M. on the 19th of December.

Autopsy, made by Dr. Satterthwaite. Body greatly emaciated; the brain and upper portion of cord were

only parts removed. Meninges of brain and cord congested, and of bright-red color; dura mater studded with numerous small, yellowish-white points; over convexity of brain, strong adhesions at a few points between dura and pia mater; a faint opaque gelatinous deposit was seen in pia mater at some points. At the base there was a large area of softening, extending from pons Varolii to anterior border of optic commissure and from one middle cerebral lobe to the other, and reaching deep into substance of brain, on the right side extending to and embracing a portion of the inner wall of the right ventricle; superficially it had a gelatinous look, while internally it was more or less mottled with yellowish and red spots, and there were small portions of broken and plugged vessels seen in it; above the left optic tract was a small, soft, deep-red clot, about the size of a small hazel-nut, surrounded by a softened mass, and there was another smaller extravasation, not coagulated, above and opposite the right crus. In the interior of left lateral ventricle some of the softened material had a creamy look. Under the microscope, this material was found to be made up in part of lymphoid cells and red corpuscles, but chiefly of large exudation-cells and granular matter. Some of these collections of cells had undergone degeneration, so that they were only recognized by their outline. The ventricles were dilated, and contained fluid in large quantities. It was clear; but the floors of the ventricles to the posterior cornua were covered with a thin layer of coagulated blood. The vessels at the base and in the fissure of Sylvius were empty for the most part, and miliary granulations about them could not be detected with certainty. The brain-substance was remarkably pale.

I am sorry that the post-mortem examination does not include an account of the condition of the optic nerves and eyeball; but Dr. Satterthwaite found it impracticable to make an examination except of the brain. Yet the results of this investigation, in connection with the clinical history and ophthalmoscopic examination, render the case, as it seems to me, an interesting contribution to the literature of descending neuritis optica.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF DR. LOUIS A. DUHRING.

Reported by ARTHUR VAN HARLINGEN, M.D.

SYCOSIS NON-PARASITICA.

THIS man presents an eruption on the right cheek, extending over an area of several square inches, involving, as you observe, not only the skin, but the follicles of the hair: it is, in fact, a case of sycosis. But there are two kinds of sycosis: one depending upon the presence of a vegetable fungus, and known as parasitic sycosis; the other a simple inflammation involving the hair-follicles, and known as non-parasitic sycosis. Which have we here? This is an important question, for our plan of treatment will be of one kind or another according to the diagnosis arrived at. Our patient tells us that the appearance of the affection has, since it first showed itself, become materially changed. At first the eruption was moist; now, on the contrary, it is dry, red, and scaly in most places, while a few pustules may be observed around the hair-follicles. Were this parasitic sycosis, the appearances presented would be quite different; great disfigurement would

exist, nodules and tubercles of various sizes, perhaps even as large as a cherry, would be observed under the skin, this form of disease going deeply into the tissues.

Our patient tells us that the eruption itches and burns severely at times; and this is another fact which would incline us to doubt its parasitic origin, for parasitic sycosis never gives rise to so great a degree of itching and burning as we have here.

We have here, then, a case of non-parasitic sycosis, the disease having commenced, probably, as an eczema, and having subsequently penetrated the hair-sacs and glands, giving rise to inflammation in these parts, and terminating in the condition we see before us.

The treatment of these cases is manifold: sometimes one remedy will answer the purpose; at another time this will fail, and we must have recourse to a different one. The first thing to do, invariably, however, is to have the patient's beard kept closely shaved. To this the patient will probably at first object, on account of the pain to which this operation gives rise; but after the first day or so it becomes much less painful, sometimes not at all so. Shaving is an absolute necessity in sycosis, both for the sake of cleanliness and because we cannot otherwise apply the local means necessary with any degree of thoroughness. The hairs, too, when allowed to grow, act as irritants. After having been cleanly shaved, our patient will have applied to all the affected parts of the skin the following ointment:

R Sulphuris loti, ʒss;
Adipis, ʒi.—M.

The diseased patch is to be carefully cleansed with castile soap and warm water, and, after drying, the ointment is to be thoroughly worked in with the finger. This procedure is to be repeated morning and evening.

As regards diagnosis, one word more may be said. In a certain number of cases this may be very difficult and obscure if we rely upon the naked-eye appearances alone. Fortunately, we have in the microscope an aid which will enable us to decide in every instance. The presence or absence of the characteristic fungus found in the epidermis and in the hair-shaft itself will decide the question without doubt.

TRANSLATIONS.

ON MICRO-ORGANISMS IN SUPPURATIONS—THEIR INFLUENCE UPON THE COURSE OF WOUNDS, AND THE MEANS OF OPPOSING THEIR DEVELOPMENT.—At a recent meeting of the Académie des Sciences, M. P. Bouloumie read a note upon this subject, from which we condense the following:

1. Pus from any collection not in direct or indirect connection with a wound never contains micro-organisms, with the exception of certain minute brilliantly refractive points often joined two and two. Pus from a wound, whatever its nature and whatever the dressing employed, has always afforded micro-organisms, usually endowed with movements which become more appreciable when the pus is diluted. In pus from an abscess in the vicinity of a wound, the number and variety of organic forms observed depend upon whether the abscess is in a tissue continuous with or only in contiguity to that in which the wound is situated. In the first case the forms are numerous and varied, in the latter few and simple.

The movements of these organisms, which are hardly perceptible at the moment the abscess is opened, become much more so after exposure of the pus to air, and especially if the latter is diluted. The elements observed in pus, besides the pus-globules, the white and the red blood-globules, are almost constantly the same; they are composed of mobile and immobile single

granules, chaplets of the same, etc., and are described at length by M. Bouloumie. All these elements are surrounded by an amorphous, fatty, granular substance escaped from the pus in process of destruction.

2. No dressing will absolutely prevent the presence of micro-organisms in wounds, although certain applications may modify their number and activity. Alcohol and glycerin appear to be the dressings which repress most powerfully the vitality and mobility of micro-organisms. Lister's dressings do not prevent their appearance in the products of suppuration.

Raw-cotton dressing, made with care, the wound having been cleansed with dilute alcohol and covered immediately with lint soaked in glycerin, permits the development of organisms only in such small quantities as to lead one to believe them contained in the dressing at the time of its application.

3. The micro-organisms above described do not exercise an equally morbid influence upon the wound under all circumstances, or upon the individual. They may exist in the products of suppuration without hindering cicatrization or injuring the patient's health. They may, however, at times invade the parts in the vicinity of a wound, and give rise to abscess in the neighborhood. They may, by means of the lymphatic or venous system, invade a healthy organism without doing anything more than provoking reaction and eliminative dejections. They may invade an organism already profoundly affected, and may develop septicæmia; first by their toxic action, then by the virulent action of the elements disorganized by them.

4. Among the agents used for dressings, it is necessary to choose those which exercise a favorable action upon cicatrization, and which, at the same time, are opposed to the vitality and proliferation of the micro-organisms. From this point of view, alcohol and glycerin ought to have the preference. They arrest the life of those vibrios which require water, by depriving them of their water of constitution.

5. It is by proper dressing, very often, that the first step in infection is prevented, and it is by an intelligent hygiene that the chances of generalization on the part of the morbid ferments may be diminished, should they escape beyond the limits of the wound.—Abstract from *Bull. Gén. de Thérap.*, January 30, 1875. X.

PARALYSIS OF THE CERVICAL SYMPATHETIC.—According to Dr. Nicati (*L'Abeille Méd.*, No. 3, 1875; from *Archives Méd. Belges*), this affection is quite frequent, although it generally passes unnoticed on account of its usual innocence. A slight drooping of the eyelid, accompanied by contraction of the pupil as well as some coloration and perspiration of the face, is all that may be noticed.

What has been called hyperidrosis, lateral facial epidrosis, anidrosis, is nothing more than a paralysis of the sympathetic nerve. M. Nicati distinguishes three periods in paralysis of the sympathetic: 1, a *period of prodromata, or artificial irritation*, the symptoms of which are similar to those produced by artificial irritation of the cervical sympathetic in animals; of this period he gives, as an example, a case of exophthalmic goitre; 2, a *first period of paralysis*, of which the symptoms are those observed in animals after section of the cervical filaments: contraction of the pupil, injection of the vessels of the corresponding side of the head, augmentation of heat in the same parts and as far as the axilla, frequent sweats; 3, a *third period*, characterized by atrophy of the diseased parts, loss of flesh in the paralyzed localities, and want of perspiration in the same. All these various phenomena, which may show themselves singly or together in paralysis of the cervical sympathetic, have been studied with care, and are detailed at some length by Dr. Nicati in his communication. X.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MARCH 20, 1875.

EDITORIAL.

PHILANTHROPY RUN MAD.

THE active and virulent assaults in London upon vivisection and those who practise it have already been alluded to in these columns; but the cool impudence of a recent act of the Royal Society for the Protection of Animals seems to us to exceed anything that we have seen or read of for a long time. It must be remembered that this Society has already taken the ground that vivisection is criminal, and that all performers of it ought to be as vigorously prosecuted as those who starve or drive to death cattle or horses, or who in Hogarthian methods put to shame and suffering the smaller domestic animals. Having taken this position, the Society now sends a circular to all the medical societies, medical schools, hospitals, etc., of Great Britain, stating, "It has been alleged that experiments upon animals are practised under the care or patronage of these various schools, societies, etc.," and asking that "a committee of the Society for their protection may be present as mute spectators on the occasion alluded to when operations on living animals are appointed to be performed at your institution, in order that we may report the proceedings of them." We are sorry to have to state that some of the medical societies have returned respectful though negative answers to these petitions. It would have been better not to notice them.

London is not the only place where ultra, bigoted

philanthropists exist: we have the same class in this community. Long ago our own society in the female branch embarrassed vivisection in this city by preventing the use of the condemned dogs of the pound. Of course, by this senseless procedure they did not stop scientific investigations, but only made them more troublesome and expensive, and thereby really increased the probabilities of cruelty being practised: when a dog costs five dollars instead of fifty cents, there is evidently a constant temptation to make the single animal go as far as possible.

The moral of the famous answer of Sir Astley Cooper to the Committee of the House of Parliament, "If you do not allow us the bodies of convicts and paupers, we will take those of members of Parliament," is perfectly applicable to the present case. The reputed action of the chief of the Paris police in the case of Magendie was a much wiser one than that of our ladies of wealth. The story, as we have heard it, is that one of Magendie's dogs having escaped in a very severely wounded condition went home to his master, who happened to hold the office aforesaid. The next day every policeman was on the *qui vive* to discover who had dared to commit the dastardly outrage, and by-and-by the crime was traced to the luckless vivisectioner. He, however, so explained the matter to the chief of the police, and was so successful in undoing what he had done, that not only was the dog restored to health, but his master was converted into an ally, so that ever afterwards the city pound was open to Magendie.

Scientific investigation has continued to go on in the face of papal bulls and religious persecution unto the shedding of blood; much less shall it be stopped by any band of sentimental philanthropists, who bear to the real lover of his kind about the same relation that an old childless woman hugging her lap-dog does to the mother with the babe in her arms.

The less of useful work any one has to do in the world, the more time is left for making trouble; and the false assertions of Mr. Bergh and his kindred may in this country—where public opinion is so powerful—make a great deal of trouble, if we do not take care to put the real facts of the case before the people. It has been with great pleasure, therefore, that we have recently read very just editorials and articles upon the subject in the *Nation* and other of our leading popular journals and papers. Much, of course, can be done in the way of influencing public opinion by means of the press; but even more can be accomplished by every physician making, by personal efforts, the little circle that looks up to him understand the merits of the case. The

little brochure of Prof. Dalton* is an excellent one to loan to friends and patients; but the following condensed statement from the *British Medical Journal* will be perhaps more useful for the refreshment of the memory of the physician himself.

WHAT HAS VIVISECTION DONE FOR MEDICAL SCIENCE?

A. *It has succeeded in advancing our Knowledge of Physiology, by—*

1. Discovery of the two classes of nerves, sensory and motor, by Sir Charles Bell.
2. Discovery of the functions (motor) of the *portio dura* of the seventh pair, by Sir Charles Bell. Previously to this discovery, the *portio dura* was often cut by surgeons for the cure of neuralgia!
3. Discovery of the functions of the anterior and posterior roots of the spinal nerves, by Sir Charles Bell.
4. Discovery of the functions of the anterior and posterior columns of the spinal cord, by Brown-Séquard and others.
5. Discovery of one of the functions of the cerebellum in co-ordinating muscular movements, by Flourens and others.
6. Discovery of the functions of the gray matter on the surface of the cerebral hemispheres as connected with sensation and volition, by Flourens, Magendie, etc.
7. Discovery of the motor functions of the gray matter covering certain convolutions in the anterior part of the cerebral hemispheres, by Hitzig, Fritch, Ferrier, Gudden, and Nothnagel.
8. Demonstration of the circulation of the blood, by Harvey.
9. Measurement of the static force of the heart, and discovery of other hydraulic phenomena of the circulation, by Stephen Hales, Ludwig, etc.
10. Discovery that atmospheric air is necessary to the maintenance of life, and that, when stupefied by its withdrawal, animals may be resuscitated by re-admitting it, by Robert Boyle, in 1670.
11. Discovery that atmospheric air by continued breathing becomes vitiated and unfit for respiration, by Boyle.
12. Discovery that the air was not only vitiated but also diminished in volume by the respiration of animals, by Mayou, in 1674.
13. Discovery of the relation, as regards respiration, between animal and vegetable life, by Priestley, in 1722.
14. Great discoveries by Lavoisier on the physiology of respiration, from 1775 to 1780; namely, that respiration acts only on the respirable portion of the air, or oxygen, while the remainder, nitrogen, is entirely passive in the process; secondly, that when animals are confined in a limited space, they die when they have absorbed, or converted into carbonic acid, the greater part of the oxygen, and so reduced the air to the state of an irrespirable gas.

15. Numerous facts in the physiology of digestion, observed by Blondlot, Schwann, Bernard, Lehmann, and others, by experiments on animals.

16. The discovery of the functions of the lacteals, by Colin, Bernard, Ludwig, and others.

17. The discovery of the functions of the eighth pair of nerves in relation to deglutition, phonation, respiration, and cardiac action, by John Reid and others.

18. The discovery of the functions of the sympathetic system of nerves, by Pourfour du Petit, in 1727, Dupuy, in 1816, Brachet, in 1837, John Reid, and Brown-Séquard.

19. The discovery of the phenomena of diastaltic or reflex action, by Marshall Hall.

20. The discovery of the action of light on the retina, by Homgren, Dewar, and McKendrick.

21. The discovery of the glycogenic function of the liver, by Bernard, Macdonnell, Pavy, etc.

22. The discoveries of the whole series of facts in the domain of electro-physiology, by Matteucci, Du Bois-Reymond, Pflüger, and many others. These discoveries have important practical bearings.

B. *In aiding Medicine and Surgery.*

1. The transfusion of blood, and introduction directly into blood of medicines; first proposed by Robert Boyle, in 1665. In 1665 Lower transfused blood from vessels of one animal into those of another. First done in human being by Dennis and Emmerets, in France, in 1666. Blundell's celebrated experiments on animals in 1818. Since done by many others,—Dumas, Milne-Edwards, Dieffenbach, Bischoff, Doubleday, Brigham, Waller, Burton Brown, Klett, Lane, Levy, Bérard, etc.

2. Artificial respiration. Vesalius showed that by blowing up the lungs with air, after the chest was opened, stoppage of the heart's action might be delayed for some time. Hook, in 1664, first demonstrated the possibility of artificial respiration. Brodie, Hope, Le Gallois, Wilson Philip, Marshall Hall, and Silvester have practised it on human beings.

3. The causes of the cardiac sounds have been determined entirely by vivisectional experiments.

4. Phenomena of the circulation within the cranium examined experimentally by Kelly, Burrows, Reid, etc.

5. Hunter's operation for aneurism was first demonstrated and tried on living animals. This he did in 1785. He also found, by experiments on animals, that in many cases the arterial coats were diseased immediately above the aneurism, and that consequently it was necessary, in order to avoid secondary hemorrhage, to place the ligature higher up.

6. The office of the periosteum in regeneration of bone has been demonstrated experimentally by Du Hamel in 1740, Hunter in 1772, Syme in 1837, Wagner in 1853, and Leopold Ollier in 1858. The practical importance of these observations is recognized by all surgeons who have had much to do with the diseases of bones and joints.

7. The researches of Redfern into disease of cartilage.

* Experimentation on Animals. New York, F. W. Christern, 1875.

8. The researches of Stricker, Cohnheim, Von Recklinghausen, and many others, on inflammation, more especially of cornea and serous membranes,

9. Without vivisection experiments, we would know very little of the phenomena of inflammation.

10. Experimental inquiries into many zymotic diseases showing occurrence of micrococci.

C. In advancing Therapeutics, Relief of Pain, etc.

1. Use of ether.

2. Use of chloroform.

3. Chloral discovered experimentally by Liebreich.

4. The actions of all remedies are only definitely ascertained by experiments on animals.

5. Action of Calabar bean, by Fraser.


6. Antagonism between active substances and the study of antidotes,—many observers.

The above are simply examples which have readily occurred to the mind. To record all the facts given to physiology by experiments on animals would simply be to write the history of the science. Therapeutics is yet in its infancy; but nearly all the facts definitely known regarding the actions of remedies have been gained by experiments on animals. To stop experiments on animals would as surely arrest the progress of physiology, pathology, and therapeutics, as an edict preventing the chemist from the use of the retort, test-tube, acids, and alkalies, would arrest the progress of chemistry.

CORRESPONDENCE.

BALTIMORE, March 2, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—For once, Baltimore has a genuine sensation, and the medical profession, as well as upper and lower Ten-dom, is making the most of it. On Tuesday, February 16, Dr. Dausch, assisted by Dr. Mansfield, delivered Mrs. Hahn, 119 Low Street, of four daughters. The first child presented by the right shoulder, the other three were footlings. There were two placentæ, three children being attached to one, and one having its own independent supply. The large placenta was about fifteen inches in diameter, and on the fetal surface had the appearance of three ordinary placentæ, with a cord in the centre of each, placed so as to form a circle, thus,  but the maternal surface showed no marks of division, and they could not be separated without laceration. The labor occupied about an hour and a half, and was free from pain. Ergot was given in 3ij doses, but produced no contractions of the uterus.

The mother is small, and in an advanced stage of consumption. This was her third confinement, and both her other children were breech-presentations, and the labor free from pain. The quartet weigh about twenty-four pounds, and the placentæ about four pounds,

which gives about thirty pounds as the weight of the uterine contents before delivery. The children are strong and healthy, and the father is doing a good business exhibiting them to the curious, for which he charges an admission-fee. Collections have been made at the hotels and other places for the benefit of this interesting family. It is intimated that a cow would be a very acceptable present.

In remarks on this case at the Medical and Surgical Society, Dr. Morris said that, according to his experience, abnormal presentations did not have the usual phenomena of labor. There is generally a state of quietude; contractions cannot be aroused, and the os dilates unheeded.

At the same meeting of the Society, Dr. Cathell advocated the external application of fluid extract of belladonna to the throat of patients with scarlatina. He had used it for eight years, and had never had a case where it was used in which the glands became excessively swollen. It seems to keep the glands in a quiescent state, so that they show no sympathy with the disease. It does not lessen the proportional mortality, and will not reduce the swelling of glands already inflamed. He thought it would be useful in bubo and all local inflammation of glands.

Dr. Lynch thought it important if belladonna will prevent induration or promote resolution of glands; but scarlatina-patients die from the fever-heat or from the intensity of the poison; and frequently the glands do not become involved. The involvement of the glands does not affect the mortality.

Dr. Cathell thought the enlargement of the glands, with the subsequent inflammation and sloughing, might add much to the danger. Prof. Lynch said he had never seen a case in which the danger was so increased.

Dr. Morris said the application of belladonna to swellings was as old as the use of the drug. He has used it for enlarged ovaries, but it is doubtful whether it does good. The mere swelling of the glands is not very alarming or significant, but if it will prevent supuration it is something gained.

Dr. Friedenwald had used it for years, in combination with camphor, in scarlatina. It seemed beneficial.

Dr. Noel asked what was the value of notched teeth, as described by Hutchinson, as an evidence of syphilis. He has a child under his care whose teeth are notched, and it has nervous symptoms which seem to indicate a tumor of the brain.

Dr. Friedenwald thought the test of very doubtful character, as he had seen such teeth in perfectly healthy children, and it is frequently seen in some forms of interstitial keratitis.

Dr. J. N. Monmonier spoke of the beneficial effects of inhalation in chronic diseases of the larynx and trachea.

Dr. Caldwell said that he had seen very beneficial effects in whooping-cough from the inhalation of belladonna and potass. brom.

At the Baltimore Medical Association, Dr. Chew read an interesting paper on the sounds of the heart. He

thought that experiments proved that the first sound was, like the second, valvular, and that muscular contraction and other causes to which it had been attributed had little or nothing to do with its production.

Dr. Arnold did not agree with him in regard to the conclusiveness of the experiments. At its last meeting this Association elected the following officers for 1875: President, Dr. John Dixon; Vice-Presidents, Drs. J. F. Monmonier, John Morris; Corresponding Secretary, Dr. W. H. Curry; Recording Secretary, Dr. S. K. Merrick; Treasurer, Dr. W. G. Regester; Executive Committee, Drs. Taneyhill, Kemp, and Friedenwald; Committee of Honor, Drs. Murdoch, Eareckson, and Chew. After the election, the annual supper was held.

This is the season in which commencements appear to be epidemic. The Dental College graduated seventeen on the 25th ultimo; the Washington University twenty-six, on the 25th; the College of Physicians and Surgeons thirty-nine, on the 26th; and the University of Maryland forty-nine, on the 1st instant. The Maryland College of Pharmacy will close its session about the 10th, and then the bouquet-trade will be stagnant until the summer.

Yours, etc.,

MEDICUS.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

CONVERSATIONAL meeting, Wednesday, January 13, 1875.

VICE-PRESIDENT DR. J. S. ESHLEMAN in the chair.

Placenta prævia.

Dr. J. S. ESHLEMAN related a case of placenta prævia which he had treated in consultation with Dr. I. McGuigan. They met very soon after the first profuse hemorrhage had taken place. The pains were feeble, as is usual in these cases; the flow continued. The patient could not long survive it. The os would scarcely admit the tips of two fingers; it was from an inch and a quarter to an inch and a half in diameter. With Dr. McG.'s consent, he at once applied the forceps and brought the child's head firmly down upon the placenta, compressing it as well as the uterine sinuses, with the effect of instantly arresting the flow of blood.

Feeble pains were now stimulated, and aided by equable traction upon the instruments. The forefinger of the left hand was frequently interposed between the head of the child and the inner surface of the os to graduate the amount of force applied by the forceps held in the other hand, and, aided by the uterine efforts, the os in time began to yield. The uterus descended under the traction somewhat, but less than is often witnessed in natural labor. The case was conducted gently, each effort followed by rest in imitation of natural labor, and terminated in about one hour. There was no perceptible loss of blood, nor was there any concealed or post-partum hemorrhage. The child, though faint, soon rallied. The uterus closed softly upon the placenta, a portion of which remained firmly adherent near the os; the remainder lay protruding from the organ in a somewhat crushed condition, yet there was no hemorrhage. After this condition was

carefully examined by Dr. McGuigan also, he proceeded to dislodge the placenta, not by introducing the hand, "prating" or tearing it off, but by external pressure, moulding, and manipulation. Mother and child are doing well.*

He announced that Dr. McGuigan was present and would answer any questions relative to the case. He expressed his obligations to Dr. McG. for the opportunity and support he had given him, that enabled him to corroborate his recommendation to the members of this Society on a former occasion to conduct placenta prævia in the manner here presented.

Delay is attended with danger to the mother and certain death to the child. Turning is acknowledged a hazardous practice to both.

He is not aware that any one but himself has advocated this early introduction of the forceps for the purpose of arresting hemorrhage by compressing the placental and uterine sinuses, and for the purpose of dilating the uterus by means of the child's head as in natural labor.

Dr. WELSH asked where the placenta was attached.

Dr. ESHLEMAN replied, to the side of the uterus in greater part, and over the os in a measure.

Dr. GOODELL asked if the waters (membranes) had been broken.

Dr. ESHLEMAN replied that they had when he arrived. Dr. E. thought when that portion of the placenta covering the os had separated it shrank back so as to admit the membranes at the aperture.

Dr. GOODELL asked Dr. Eshleman to explain how the os was made to admit the forceps.

Dr. ESHLEMAN replied that the diameter of the os was less than the width of the blade of the forceps, but he was able in the absence of pains to elevate the head of the child, when the blade of the forceps would elongate the circular opening into the shape of a button-hole, so as to admit its passage; the second blade, being somewhat narrower, will pass over the shank of the first and enter the same aperture. It is surprising to test how small an opening will admit the forceps, and equally so how large a one is required to admit the hand.

In reply to Dr. Hamilton, he said that ergot was given in the hope that it would favor contraction of the emptied womb, but its effects could not be waited for to aid labor or depended upon to arrest hemorrhage.

Dr. MCGUIGAN, being present, was asked to give his statement of the case reported by Dr. Eshleman.

He stated that the day but one prior to her delivery, he found blood issuing from the vagina. She had lost a previous gestation by hemorrhage. The cervix was three-quarters of an inch in length, and he could feel the foetal envelopes, but not the placenta. Two days after, he found her bleeding, and in regular labor; the os open three-fourths of an inch, the membranes intact; the placenta could be felt three-fourths of an inch from the external os on the left side, and detached for the space of two inches. The pains were quick and forcible; the head was not engaged. He punctured the membranes when the pains became feeble and slow. The bleeding was not continuous during the two days mentioned.

Dr. ATKINSON said that the occurrence of placenta prævia in two succeeding pregnancies was exceedingly rare. Nor was there any reason to expect such a complication to occur again because a patient had once suffered thus.

In the only case that he had seen in which there was placenta prævia, it was almost completely central. There were no contractions. Ergot appeared to have no effect, although freely administered. He tore through the placenta, put on the forceps, and thus de-

* Recovered subsequently without an untoward symptom.

livered. The child had been dead for some time. The woman did well.

Dr. WILLIAM GOODELL then read a paper on "Head-Last Labors."

Dr. ATKINSON expressed his thanks to Dr. Goodell for this valuable essay. Especially to the young practitioner was this paper of great value. Almost continually we find children sacrificed to the timidity of the physician, who, fresh from the school and the warnings as to meddlesome midwifery, hesitates to do that which would save the infant. He was glad to find that a new school was being founded, in which the student is taught to aid the efforts of nature, rather than to sit by and wait for nature to do all the work.

Although he had repeatedly encountered head-last labors, he had never been compelled to use the forceps, but had always succeeded in speedily delivering by the method mentioned by Dr. Goodell. Supra-pubic pressure by the hand of an intelligent assistant, or, failing that, by the practitioner himself, he had always found of great value in speedily causing the head of the child to emerge.

Dr. BENJAMIN LEE was not sufficiently engaged in obstetric practice to be able to criticise the paper intelligently, but it appeared to him that little could be added to the extremely lucid and exact descriptions both of the mechanism of these presentations and the manipulations necessary to conduct them to a successful result. His object in rising was to confirm the lecturer's statement as to the great amount of traction which the neck would bear with perfect impunity. He was in the habit of treating his cases of spinal curvature, both lateral and angular, by means of modified suspension, the chin and occiput forming the points at which the force was applied, and the line of traction being thus in the direct axis of the spinal column. The head-straps, meeting above the ear, were attached to a steel bow just above the head, at the end of a long rope which passed over a pulley securely fastened to a stout joist. The patient takes hold of the other end of the rope, and draws down until the weight of the body is entirely sustained, the feet being raised from the floor. One-half of the weight was thus borne by the arms, and one-half by the neck; but the amount of traction was increased considerably beyond this from the fact that the patient swung himself often with much force. So far from this application of traction to the neck being unpleasant, it affords, in cases where the weight of the body was causing suffering by grinding pressure upon inflamed and ulcerated vertebræ, a delightful sense of relief, and he was often obliged to restrain his little patients in its excessive or too violent use. He did not hesitate to employ it where the cervical vertebræ were themselves the seat of the disease.

Dr. ESHLEMAN asked Dr. Goodell if he did not find in the living child that the cervical muscles contracted firmly when traction was made upon the head, thus giving important support to the spine.

Dr. GOODELL said he had so found it.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

WEDNESDAY, FEBRUARY 3, 1875.

Dr. W. W. KEEN read a paper entitled "Experiments on the Laryngeal Nerves and Muscles of Respiration, etc., in a Criminal Executed by Hanging," of which the following is an abstract.

Dr. George Johnson had expressed the belief that while pressure on one recurrent nerve will cause direct unilateral palsy of the larynx, but not bilateral spasm or palsy, pressure on the vagus involving its afferent fibres may cause both. The reason of this he supposes

to be that the nerve-nuclei of both sides are so connected that each possesses bilateral activity. Dr. Mitchell having suggested the probability of a chiasm of the minuter fibres of the recurrenents in man, which, though not demonstrated anatomically, might be proved physiologically, the following experiments were undertaken upon a criminal recently executed by hanging. After hanging about half an hour, the body of the criminal was cut down, and immediately examined. The left vagus and recurrent laryngeal were dissected as low down as possible in the neck, and the vocal cords examined while the nerves were excited by electricity. Repeated faradization with weak and strong currents, and galvanization with from four cells up to forty, of the recurrent and also of the vagus, produced decided movements of the left cord only, and none of the right. The wires were applied directly to each nerve, and the irritating action of a tumor simulated as nearly as possible. Careful dissection showed that in all probability none of the fibres of the vagus were injured.

The definite conclusion to be drawn from the experiment is that no chiasm of the inferior laryngeal nerves exists. No reflex motion was observed in the larynx, although the absence of this may have been due to violence done the parts by hanging.

Experiments upon the muscles of respiration were then undertaken. The left phrenic, having been insulated, was excited as in the previous experiments, but without result; no movements whatever of the chest were produced, nor was greater success obtained by one wire applied to the nerve while the border of the diaphragm was followed with a sponge, nor when both sponges were applied to the diaphragm.

The intercostals were then examined. Having been exposed from the median line to the line of the axilla, the interrupted current was applied to the inter-cartilaginous portion of the internal intercostals by means of small sponges, when it was found that they all raised the cartilage below them. The external intercostals were then faradized, when the upper rib was pulled down very markedly, while the lower one was just perceptibly raised; the movement increased from the first to the seventh, the last four not being examined. These experiments seemed to point to the conclusion that the internal intercostals are inspirators, and the external expirators.

The muscles of the face still retained their electromuscular contractility; but one was examined carefully, the pyramidalis nasi, which appeared as a result of the electrical excitation to act as the direct antagonist of the central portion of the occipito-frontal. Dr. Keen pointed out, in conclusion, the important results which this new method of investigation—the faradization of the muscles on the recently dead—promises to yield.

Dr. WHARTON SINKLER exhibited an office-battery made by Otto Flemming, No. 15 North Ninth Street, Philadelphia. The arrangement is a very convenient one, and enables the operator to use either the induced or the galvanic current at pleasure. The cost of the apparatus, complete, is \$180.

REMOVAL OF A NÆVUS OF THE UPPER LID BY MEANS OF A LIGATURE.—M. Talko records the case of a child aged ten months, who suffered from a telangiectasis of the upper lid one-third of an inch in diameter, a rapid cure of which was effected by passing two needles at right angles through the base, and tying a silk thread tightly around the base. No swelling of the lids followed; slight suppuration took place in the collapsed tumor which fell off in the course of a week, a clean wound being left. There was no puckering or retraction of the eyelid.—*Practitioner*; from *Centralblatt für Chirurgie*, No. 32, 1874.

SELECTIONS.

HILDEBRANDT ON THE TREATMENT OF UTERINE FIBROMA AND MYOMA BY HYPODERMIC INJECTIONS OF ERGOTIN.—Professor Hildebrandt, in the *Beiträge zur Geburtshilfe und Gynaekologie*, Band iii. Heft 2, 1874, remarks that recent literature has been lately very full of repeated trials of hypodermic injections of ergotin for the treatment of uterine tumors. As a rule, the result has not been favorable. Failure seems to have arisen chiefly from three causes: the extreme pain endured by the patient; phlegmonous inflammations and abscesses; and, in one case, poisoning. The strongest argument that has been used against it is, that those who have the hardihood to go through all the suffering have derived no benefit whatever. As to Dr. Hildebrandt himself, his experience has differed in no wise from that previously reported (*Berliner Klinische Wochenschrift*, No. 25, 1872), and he is perfectly satisfied with the results, which go to substantiate his previous assertions.

First objection: *Pain*.—The solution of ergotin now employed has 13 parts of water to 3 of the extract ergot, and 2 of glycerin. It causes less pain than when the quantities of water and glycerin were equal. The glycerin is added to prevent the formation of fungi. With this preparation, the pain is not greater than that usually experienced with the injection of quinine. The first applications are the most painful; the region of Poupert's ligament is the most sensitive spot, and that of the umbilicus the least so. There are two distinct varieties of pain; the first an immediate one, the effect of irritation to the cellular tissue, lasting a couple of hours; the second coming on later, and continuing for about an equal time, arising from contraction of the uterus. The latter kind of pain is essential to the success of the operation; the more severe it is, the more likely the desired effect will be obtained. Wernich's solution produces this pain also. The more deeply the needle is driven, the less intense is the first variety of pain.

Second objection: *Phlegmonous inflammation and abscesses*. Dr. Hildebrandt has never seen these accidents follow his own injections, and only twice where his assistants had operated; and this out of over one thousand hypodermic injections. These complications are believed to depend upon not inserting the needle deep enough; he passes the canula at least two-thirds of its depth, and does not mind injecting the fluid into the muscular tissues. The skin and its mediate superficial layer of cellular tissue should be thoroughly cleared. The experience of Langenbeck, Awater, and Löhlein coincides with his own, both as to this method of diminishing the pain, and obviating the occurrence of abscesses.

Kleinwächter's case of *poisoning* arose from the solution being too strong, three and a half parts nearly of ergotin to two of water and two of glycerin. The symptoms were analogous to those of morphia-poisoning: "deep stupor, reduction of temperature, pulse 140."

Against the negative results of other investigators he places the positive benefits obtained, as observed by Hermanides, Eggel, Bengelsdorf, Cl. Mayer, Keating, Hening, and Wernich; the latter having seen the treatment check hemorrhage in the majority of cases even after five or six injections, where it had been used solely for that object. Scanzoni writes him privately under date of March 30, 1874, that he is, as a whole, completely satisfied with his results, although he cannot flatter himself with ever having seen the entire disappearance of the tumor. He has used it in seventeen cases of large and small fibromata, the injections being persevered in for months. In one instance, a tumor midway between the navel and pubes diminished to the

size of an orange after forty injections. In a case of flooding from fibroma, it was arrested after the seventh injection. Dr. Burow writes privately to say that in one case a fibroid of the size of a child's head was reduced in three months to the size of an orange, with complete cessation of menorrhagia.

Dr. Hildebrandt now gives sixteen fresh cases, which occurred either in his own practice or under his immediate supervision, and divides them into three classes:—1. Removal of the symptoms, with reduction of the tumor; 2. Marked improvement of the symptoms, with slight reduction of the tumor (these were partly his own and partly others); 3. No effect either on the symptoms or on the tumors.

I. *Removal of the Symptoms, with Reduction of the Tumor*.—In the first division there are five cases, in women respectively of the ages of forty-three, thirty-four, twenty-eight (single), thirty-seven, and thirty-six years. In the first case, the tumor reached to the umbilicus; the uterus was moderately thickened and elastic. At the end of fifty injections, during two months, the tumor had receded to about the size of a three-months' gravid uterus. In the second case, the fibroma, about the size of a man's fist, was felt to be in the right side of the abdomen. With fifty-five injections, during three months, the tumor had ceased to be felt through the abdominal parietes. The small subperitoneal tumors which were noted before the operation were in no wise affected, except being more prominently felt. In the third case, that of a single woman, the tumor was nearly up to the navel; it was elastic, and distinctly demarcated from the surrounding organs. Twenty-six injections, during two months, diminished the tumor so much that its apex could be felt on a level with the pubes. At the request of the woman, the treatment was not continued. In the fourth case, the uterus was deeper than normal in the pelvis; the infra-vaginal portion of the cervix was not altered; the uterus was about the size of an apple. The uterine sound passed in 9½ centimetres (about 3¾ inches). There was profuse menorrhagia. In less than two months, after sixty-two injections, the uterine sound passed in 7½ centimetres (about 3 inches), and the body of the uterus was about the usual size of a multipara. In the fifth case, the uterus was universally enlarged to about the size of a small apple, with a fibroma in the wall on the right side; menstruation was excessive. With fifty-five injections, at intervals of two or three days, only half of the amount of solution being employed at times, on account of the pain, the uterus remained the same; but the tumor entirely disappeared. The tumor might have been only an exudation.

II. *Marked Improvement of the Symptoms, with Slight Reduction of the Tumor*.—Case 1. A woman (age not given) had menorrhagia of two and a half years' standing. The fundus of the uterus was about three finger-breadths above the pubes; a large fibroma was diagnosed on the right side of the uterus, extending into the cavity; it was firm and smooth on the surface. Sixty injections were made during nearly three months. At the end of the time the uterus was found to be on a level with the pubes, the menstruation had become normal, and the woman was able to move about again.

Case 2. The age of this patient is not given. The catamenia were regular as to time, but excessive in quantity and clotty. The uterus was as large as at the fourth month of gestation, anteflexed, with a subperitoneal fibroma as big as an apple in the left and upper side; an intra-uterine fibroma was also believed to exist. The uterus was firmly elastic. Fifteen injections were given, one every second day; the treatment could not be borne longer, on account of the suffering induced. Menstruation became normal.

Case 3. The patient, aged thirty-seven, had menor-

rhagia, with regularity, however, as to time. There were two uterine tumors; one subperitoneal, on the left side; the other, a larger one, intramural, in the posterior wall. Both were diagnosed as fibromyomata. Daily injections were used for a month, with an interval once of four days, from some phlegmonous inflammation showing itself around the seat of puncture. The next period was better, the tumor was slightly less, and perceptibly so; it was more readily felt, and more distinctly demarcated from its uterine parenchyma.

Case 4. In this woman, aged thirty-five, there had been excessive menorrhagia for the last two years. A large fibromyoma was distinctly defined, growing in the anterior wall, expanding the uterus above the pubes to about the size of the fifth month of gestation, at the same time descending deeply into the pelvis. Forty-seven injections were made in three months. The menses, which previously appeared every fourteen days, now had an interval of twenty-one and twenty-three days; their quantity was more normal, but they were still profuse. The uterus was a little smaller.

Case 5. In this patient, thirty-four years old, the catamenia appeared for the last twelve months every three weeks; they were excessive, with expulsion of clots. A fibroma about the size of a child's fist was diagnosed in the left wall of the uterus. Forty injections were made in three months. The fibroma became one-third smaller, the menses ceased, and pregnancy occurred, which pursued a normal course.

Case 6. A single woman, age not stated, had extremely profuse, painful menorrhagia every fourteen days, lasting eight or nine days. She had continued in this state for the last six years, and was extremely blanched. The uterus was anteфлекed, broad, and extending a little above the pubes; the tumor had a firm consistence, with a smooth surface. Twenty-two injections were made during nearly two months. She became better in every respect; the catamenia appeared with an interval of twenty-nine days, continuing seven days. The injections were continued with good effect on the hemorrhage and benefit to the patient, without, however, producing any perceptible diminution of the tumor. This was in 1872. During the winter of 1873-74, in spite of the injections, the hemorrhage became freer, and for the time profuse. What was the exact cause of this return of hemorrhage the writer cannot say, but he thinks that the tumor (submucous?) might have descended, become seized in its downward course, which occasioned a temporary increase of bleeding.

Case 7. The patient was single, aged forty-seven. The uterus was the size of a man's head; menorrhagia was excessive, and she had leucorrhœa. Twelve injections were made. The menstruation was moderated, the periods being two days shorter. The tumor was unchanged; the fluor albus remained the same.

Case 8. This patient was aged thirty-five, with profuse menorrhagia every three weeks, of eight or ten days' duration. The fundus was felt midway between the navel and pubes; it was globular and firmly elastic. The cervix was patulous as far as the internal os. Twenty-five injections were made. The next period lasted nine days, but was moderate in quantity. The general condition was benefited. The uterus was two finger-breadths above the pubes.

Case 9. This woman was thirty-eight years of age; she had suffered from excessive menorrhagia for seven years. The last two years the menses had appeared every fourteen days, and there was a continuous intermediate sanguineous discharge. A slightly elastic tumor of the size of a fist was felt in the wall of the anteфлекed uterus. After fourteen injections, menstruation became normal, for the first time for years. The tumor was somewhat smaller. Notwithstanding every precaution, phlegmon occurred twice in this case.

III. *No Effect on Symptoms or on Tumor.*—Case 1. The patient, thirty-seven years old, had a painful tumor on the right side of the abdomen. There was no leucorrhœa. Two tumors were found in the uterus; one, of the size of an apple, in the anterior vault of the vagina, connected with the anterior wall of the uterus; a second, somewhat smaller, in form like a normal uterus, seated on the right side of the walls of the uterus. Daily injections were made for fifteen days without producing the slightest alteration on the tumor. Case 2. The uterus was of the size of a man's head, with even surface and of hard consistence. There was profuse menorrhagia, with faintings. In Case 3, an old submucous fibroma was diagnosed; the patient derived not the slightest benefit from thirty injections.

Dr. Hildebrandt has again seen the first of his former published cases, after a lapse of two years. She came into the hospital with a five-months' child at the breast. He examined her, and found the uterus of normal size, without a trace of any abnormalities. In Case 5 of the same series the benefit continues, but the uterus is no smaller.

He believes it is essential, in order to obtain a successful result, that the tumor should be compressed by protracted contractions of the uterine walls. As, in neoplasms of other parts of the body, absorption can be produced by prolonged instrumental compression, so also may fibromyomata be reduced in size by similar compression by a tetanically contracted uterus. Whether the action of the ergot in causing contraction of the uterus and thereby compressing the tumor is the only way in which it operates, remains doubtful. In some cases, he is under the undoubted impression that the tumors soften before they lessen. If this softening were always present, it might be explained by supposing that the tumors, through an excess of blood in the veins, and a diminution in the arteries, as seen by direct experiment of Wernich, were gradually disintegrated. He protests against having ever maintained or believed that every fibroma of the uterus was capable of dispersion by ergotin injections.

The consistence of the tumor is all-important. An old impoverished fibroma, consisting chiefly of thickened connective tissue, is as unlikely to be absorbed as a calcareous mass. If the ergot increase the hemorrhage and discharge, it is probable that it does so by the uterine contractions causing a narrowing of the vessels. This is generally found to be the case in aged persons, the reverse, however, with the young; with the latter the tumors are vascular and loose, with muscular fibres. The most favorable cases are those which resemble in form and consistence a tense elastic cyst, which was the case with his first published case.

Energetic uterine contractions are essential to success; hence the uterus must be healthy and capable of contraction. Thin muscular walls are less fitted, as seen in some subperitoneal and submucous fibromata of large size, where the uterine walls are much expanded. In the intermediate-sized tumors, there is more risk of indurations and exudations into the parenchyma than there is from thinning. The cases the least suited are those where there have been some chronic parenchymatous metritis or perimetritis and parametritis. These conditions should be first cured before attempting injection of ergot. Lastly, the most favorable position is immediately under the mucous membrane,—the muscular layer that covers it being perfect. In the middle of the uterine walls it is less favorable, but least of all when subperitoneal. In the latter kind of cases he has at times observed the tumor pushed out, and thereby rendered more prominent, by injections.

In order to promote rapid absorption of fibromyomata, the following conditions are essential:

1. Their seat should be submucous.

2. Their consistence should be of a tense, elastic, muscular character.

3. The uterine walls should be healthy, contractile, not thinned by stretching, not unyielding through exudations, and the uterus free from perimetritis and parametritis.

He adds that whoever thinks he will cure the symptoms and remove the tumors by a few injections greatly errs. At least from twenty to fifty or more are absolutely necessary to obtain favorable results.—W. C. GRIGG, M.D., in *London Med. Record*.

GLEANINGS FROM OUR EXCHANGES.

SYPHILITIC ULCERATION OF THE ŒSOPHAGUS—DIAGNOSIS BY AUSCULTATION (HAMBURGER'S METHOD).—Dr. F. W. Godon gives an account of a case occurring under his care, in which the patient had suffered from dysphagia for six weeks. He had suffered some fifteen years previously from constitutional syphilis. There was no evidence of lung-disease, and he had no cough and no expectoration.

Examination of the throat and pharynx revealed nothing abnormal. The larynx also was found to be healthy, and there was no obstruction at the orifice of the Œsophagus. Only fluids could be swallowed.

The patient was made to drink a mouthful of water, and while he was swallowing it Dr. Godon auscultated the Œsophagus by Hamburger's method (detailed in the *Lancet* for May 30, 1874). By this means it was found that the water on reaching a point opposite the fifth dorsal vertebra was regurgitated with a loud splash; the fluid, however, was not thrown up into the mouth, but, at the expiration of a few seconds, passed down beyond the point of obstruction, and finally reached the stomach. By means of auscultation, a trickling or dropping could be distinctly heard during the passage of the liquid over the site of stricture, and the act of swallowing occupied some five minutes for its completion. Examination with a No. 8 bougie showed a tight stricture at the junction of the middle and lower thirds of the canal.

The case was diagnosed as one of syphilitic ulceration of the mucous membrane of the Œsophagus, and the patient was treated with iodide of potassium and ice, under which he rapidly improved. At the end of a month the disease had yielded so far that a No. 8 bougie could be passed without difficulty.

Notwithstanding this, a certain amount of thickening had taken place, and the patient was directed to continue the iodide at least two months, and was discharged with a guarded prognosis. Dr. Godon lays great stress upon the advantages of Hamburger's method in the diagnosis of these obscure affections.—*Pacific Med. and Surg. Jour.*, February, 1875.

A SIMPLE PROCESS FOR ESTIMATING UREA IN URINE (*The Practitioner*, February, 1875).—Mr. W. J. Russel describes a method for the estimation of urea, based upon a chemical reaction long known, but not hitherto available, on account of the elaborate calculations required.

Urea is decomposed by hypochlorous or hypobromous acid into water, carbonic acid, and nitrogen. If then the carbonic acid be absorbed by caustic soda, the gas evolved will be nitrogen alone, the amount of which will of course be an index of the urea. The apparatus used by Mr. Russel consists of a mixing-tube of such a form that the ingredients (hypobromate of soda, caustic soda, and the urine) can be introduced separately and mixed *in situ*.

This tube is inserted into the bottom of a water-bath of peculiar construction, figured by the author, and when the reaction commences the gas evolved is collected in a glass tube, so ingeniously graduated that the divisions are numbered to give the percentage of urea at a glance. The estimation is thus reduced to a matter of minutes, and the apparatus is certainly worthy of trial.

METRO-CEREBRAL DISEASE.—Dr. Percy Boulton, in a note to the *Obstet. Jour. of Great Britain and Ireland*, February, 1875, calls attention to the reflex disorders brought about by diseases of the uterus, the difficulty and the importance of properly distinguishing them. Headache, neuralgia, depression of spirits, hysteria, melancholy, epilepsy, pulmonic phthisis, cardiac irritation, dyspepsia, constipation, diarrhoea, flatulence, enuresis, are mentioned as a few of these reflex affections, and a case is related concerning a lady in whom the most threatening symptoms of melancholia were entirely dissipated by the cure of a diseased uterus. The inference drawn is that vaginal examinations should be made in many of the diseases of married women.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Among the "Notes and Queries" to the *Philadelphia Medical Times* of February 27, 1875, is a note by Isaac Smith, Jr., M.D., headed "Criticism Corrected," in which certain charges of unfairness are laid to the door of "*our critic*," and which, for his own sake, *our critic* feels bound to answer. They are—

1. That the article is not quoted "*candidly and honestly*," or "*in full*."

2. That what is quoted is done in a slovenly manner; and,—

3. The text seems to have been "*criticised*" without due regard to its "*subject matter*," either in "*letter*" or "*import*."

1. In this criticism, all I claim to do is to "copy the doctor's case in full." That I have done. The "twenty-three and a fraction of lines" were "omitted," as they had nothing to do with the case. They relate to Dr. S.'s speculations on it, and were therefore left out, although I confess they were exceedingly ingenious and amusing, as, indeed, the entire record is.

2. Whatever of "*slovenliness*" attaches to the part quoted is due, let me say, to the recorder, not to the critic; indeed, this quality might be said to pertain to the entire article. The history was quoted *verbatim*.

3. The case was criticised with reference to the "*letter*" of the "*subject matter*;" its "*import*" I supposed was contained in the "*letter*." To avoid even unintentional injustice, if Dr. Smith will kindly inform me of the true reading of the "*subject matter*," as regards both its "*letter*" and "*import*," I will, if wrong, gladly acknowledge my error.

"By the assistance of time," says Dr. Smith, "which is the great developer of all that is valuable in science, literature, and arts, as well as men, I shall also enumerate other syphilitic lesions which were evolved during the treatment of the case, and which were inadvertently omitted in my article."

Dear doctor, do not wait for "time" in giving the symptoms already "evolved;" give them now,—everything bearing on the case will be of value in explaining it,—and let future lesions, whatever they may be, be left to the "great developer."

NEW YORK, March 4, 1875.

FRED'K R. STURGIS, M.D.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In the last number of your journal, March 13, an article appears by Dr. J. M. Boisnot on "A Case of Purpura Hæmorrhagica Requiring Transfusion," which requires some notice from me. On Sunday night, June 21, 1874, Dr. Boisnot wrote me as follows: "I am attending a case which will most certainly require transfusion, or something nearly as energetic, on account of the loss of blood from purpura hæmorrhagica. Can you come with the bearer? if not, please send word when. Bring apparatus and appliance for plugging nares."

I was out of the city, and, on my return the next morning, received another urgent message. With my private assistant, Dr. W. C. Cox, and the late J. T. Hopper, a student of medicine, and with the necessary apparatus, we reached Mr. Hirsh's at noon. The case was indeed a desperate one. After explaining the dangerous condition of the little patient, as well as the possible risks attendant upon the operation upon a child so young, transfusion was agreed upon. I then bled the father, defibrinated the blood, and, with difficulty, opened the vein at the bend of the elbow in the right arm. I then readily, and very successfully, injected three syringefuls of blood; a violent chill with serious syncope followed. Very threatening symptoms continued for a considerable time, and slowly passed off. On going to see the child the following day, I met Dr. Fricke, and asked him to go in and see with me this interesting case. I have stated the above rather fully, perhaps, for the reason that, although so intimately connected with the case, I am, curiously enough, not even referred to, much less given any credit which may be due me for having performed an operation which certainly saved the child's life.

The operation from the beginning to the end was performed by myself; while I relied upon and received the principal assistance from Dr. Cox, who had been with me in all of my other transfusion cases. Dr. Boisnot, as well as the others present, aided me when called upon.

I would care very little about this, however, and would not have taken up so much of your valuable space, were it not that prior to and subsequent to the publication of my paper on "Transfusion," in the *American Journal of the Medical Sciences*, July, 1874, I answered inquiries from medical friends here and abroad respecting my cases and the apparatus used; and this last case occurring just at that time, and in a subject so very young,—probably the youngest on record,—led me to give, in several instances, the details of the case. It now appears either that my statements then given are without the least foundation, or that Dr. Boisnot has failed to present a complete history of the case, for he merely states that "transfusion of $\frac{3}{4}$ of blood from the father yielded a result beyond our most sanguine expectations." To whom "our" refers, the reader is not informed.

Very respectfully,
T. G. MORTON.

PHILADELPHIA, 1421 Chestnut Street, March 13, 1875.

DR. T. G. MORTON, 1421 Chestnut Street.

DEAR SIR,—I have received a copy of the current number of the *Medical Times*, containing an account of an operation of transfusion of blood performed on my son. I am much surprised that no mention is made of your name in connection with the case, as you personally performed the operation.

Respectfully,
LEOPOLD HIRSH.

PHILADELPHIA, 1318 Marshall Street, March 13, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—If I understand correctly the statement made in the "Therapeutic Notes," and also in the article on "The Use of Cold in Fever," in the number for February 27 of your valuable journal, referring to G. Mayer's paper in the *Jahrbuch für Kinderkrankheiten*, vii. 4, both articles contain a slight inaccuracy as regards the mode of administering the bath in scarlet fever. Your journal has it that Dr. Mayer "has been placing the child in a bath of from 93° F. to 73° F. for ten minutes, whenever the temperature rises above 102° F.," while Dr. Mayer places the child in a bath of from 93° F. to 88° F., and cools it gradually to from 77° F. to 73° F., whenever the temperature of the body exceeds 102° F.

In reading the description of Leube's ice mattresses, it occurred to me that it would be much easier and much more convenient to send for the undertaker to bring one of his patent corpse-preservers and place the patient in that to cool him off. He could have one or two blankets, and the window could be opened which is usually found at the head of these modern contrivances, and so enable him to get a sufficiency of that commodity, oxygen. By adding salt to the ice in the ice-compartment, any degree of cold desired might be produced, and the patient defervesced any number of degrees F.

This method would be particularly applicable in large hospitals, where the attending physician could order John to place the patient in the apparatus and put a thermometer in his axilla, and leave him there till the mercury reached 100° F. or 98° F.

I take it for granted that every physician of any experience is sufficiently familiar with this apparatus, so that it is not necessary to give a description of it; and I think few will deny that it would be effective.

M.

GERMANTOWN, March 9, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In an article on Cold in Fever, you state that the only mention yet of cold baths being used in inflammation of the lungs is in an article by G. Mayer, in *Schmidt's Jahrbücher*, p. 347. But in the last vol., No. 5, of Von Ziemssen's *Handbuch der Speciellen Pathologie und Therapie*, just published, the first article is on pneumonia, by Prof. Theo. Jürgensen, and his sole treatment in that disease is by cold baths, and also quinia, of which he gives thirty grains at a dose.

He also uses wine before and after the cold bath. The whole number he treated with cold baths and quinia wine is two hundred,—one hundred and fourteen males, eighty-six females; died, twenty-four,—and of these twenty-four, all were complicated. Not one died of acute pneumonia, but eight of delirium tremens, two of abortion, two of pertussis, four of peritonitis chronica, and the other of pericarditis. He says that his death-rate may speak for itself.

One of his maxims is, Never forget that the worst enemy the heart has is the high temperature; and this is certain to be reduced by the use of cold baths.

Truly, yours,
C. H. SMITH.

KENTON, OHIO, March 7, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Under "Therapeutic Notes" in your number of February 20, you speak of "A New Poultice," and omit an important point in so doing.

The poultice Lelièvre is prepared by saturating cotton-wadding with a very mucilaginous decoction of carrageen, pressing and drying it. This then admits of being "cut into thin plates" and used as your article describes, and possesses all the advantages therein enumerated.

I have made some of it at the request of Dr. Hewson, and I believe that it is now made and in use at the Pennsylvania Hospital, giving great satisfaction.

Very truly, yours,
GEORGE J. MCKELWAY.

We have received a letter from one of our Western correspondents, making the gravest charges against H. V. Sweringen, of Fort Wayne, Indiana, a paper by whom was published in the issue of the *Philadelphia Medical Times* for February 27. At this distance we are, of course, unable to give an authoritative opinion in regard to these charges, but assert, without hesitation, that Mr. Sweringen has been guilty of the gravest breach of professional etiquette, not to say common honesty, in sending to a distant medical journal a medical article, and then having it published in a local newspaper, and himself and newspaper afterwards editorially puffed because the *Times* had copied his article from the newspaper. The editor of the *Times*, not being omniscient, cannot always detect the disguises of Satan, but can only point out the true nature when the cloven foot appears.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In my article on organic matter in drinking-water in your last issue, I suppose no person on second thought would *extemporaneously* prepare Nessler's reagent and use potassium iodide by the *pint*; yet if *part* were substituted, so as to read, "one part of salt to twenty parts of water," it would be at least more practicable.

Very truly, yours,
CHARLES MCINTIRE, JR.
PHILADELPHIA, March 9, 1875.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

The next conversational meeting will be held at the hall of the College of Physicians, Wednesday, March 24, at 8 o'clock P.M.

Dr. Joseph Leidy will lecture on the "Anatomy of the Ear."

The medical profession in the city are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 9, 1875, TO MARCH 15, 1875, INCLUSIVE.

O'REILLY, R. M., ASSISTANT-SURGEON.—Granted leave of absence for twenty days. S. O. 28, Department of the Platte, March 5, 1875.

MUNN, C. E., ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to return to his proper station. S. O. 39, A. G. O., March 8, 1875.

SATURDAY, MARCH 27, 1875.

ORIGINAL COMMUNICATIONS.

METHODS OF PHYSICAL INVESTIGATION IN DERMATOLOGY.

BY HENRY G. PIFFARD, M.D.,

Clinical Professor of Dermatology, University of New York; Surgeon to Charity Hospital, etc.

IN the investigation of cutaneous phenomena we are able to avail ourselves of the assistance afforded by three of the special senses,—those of sight, smell, and touch,—supplemented and sometimes rendered more precise by various instrumental aids.

Our unaided eyes enable us to judge of the color, form, and distribution of the various lesions or objective manifestations of disease; while with the aid of a lens we are able to observe fine surface-markings, to define more accurately the form of minute lesions, and more easily to detect certain parasites.

Heretofore the single lens or simple microscope has been the main reliance for this purpose. This instrument, though convenient, is limited in its application to cases in which only a slight degree of amplification is desired.

The difficulties which surround the attempt to study the cutaneous surface with simple lenses of high power are mainly the following: The shorter the focus of the lens, the nearer it must approach the object; the illumination is diminished; the field of view is contracted, and the spherical aberration becomes so evident as materially to jeopardize the accuracy of the observation. In addition, the shorter the focus, the nearer must the eye of the observer be approached. This often involves a constrained position of the head and neck, and, in some cases, an unpleasant proximity to the subject under investigation.

To obviate these inconveniences, and at the same time to obtain a comparatively high amplifying power, I was led to adapt the compound microscope to the purpose in view. The arrangement of the instrument* which I employ will be readily understood from the accompanying cut.

A represents the body of a binocular microscope made by Nacet, from which the reflecting prism situated above the objective was removed, and another of the same form but double the size substituted. B is a double nose-piece carrying two objectives of different powers. C is the pinion for fine adjustment, and D the clamp-

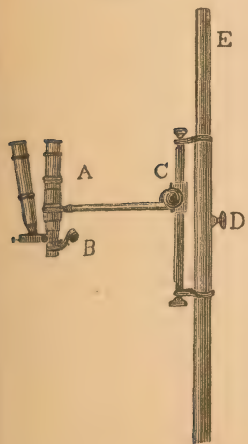


FIG. 1.

ing screw for coarse adjustment. E is a rod five feet in length, which supports the other apparatus, and is itself supported by a cast-iron foot not shown in the drawing. Other adjustments permit the body of the microscope to be placed in a horizontal or any other desired position.

The objectives which I employ are a 6", 2", and 1", of Grunow, a 4" and 1/2" of Ross. The 1/2" is made with taper front, specially constructed for use with reflected light.

The advantages of this arrangement over the single lens are enlargement of the field of view, absence of spherical and chromatic aberrations, convenient distance of the observer's eye from the object observed, ten times the amplification practically attainable with the simple microscope, and, lastly, the very great advantage of true stereoscopic vision.

With the instrument described, any portion of the integument from the scalp to the sole of the feet can be conveniently examined, and a prolonged examination can be made without fatigue to the observer.

It is an instrument which I cannot too highly recommend to those desiring a thorough knowledge of the surface-aspect of the skin and its lesions.

Pursuing our investigations deeper, we have the ordinary methods of the laboratory at our command. These, as applied to dermatology, consist in removing small pieces of skin from the living or dead subject, hardening them in some preservative solution, and finally cutting them in thin slices, or sections as they are called.† These thin sections are then examined with the ordinary compound microscope.

This field of investigation has been specially worked by the German dermatologists, and it is to them that we owe most of our knowledge concerning the minute anatomy of skin-lesions. Americans, however, have contributed something to this branch, as the researches of Derby, Geddings, Haight, Warren, Young, and others testify. It is but just to add, however, that the investigations of these gentlemen were mainly conducted at Vienna, and under the mantle of the German school. The French and English have done little in this department, except in connection with the parasitic affections. The anatomy of the normal skin, however, has been best studied by the French, the names of Breschet and Sappey being specially memorable.

It is sometimes desirable to obtain thin sections of morbid skin for microscopical examination in a perfectly fresh condition and unaltered by reagents. This may be accomplished by means of a little instrument called the cutisector, which I devised some years ago,‡ but have since improved, giving it the form shown in the cut (Fig. 2).

It consists of two sharp, parallel, semilunar blades, which, by means of a screw, can be adjusted at a definite distance from each other. If, with the

* A notice of the instrument has been previously published in the Archives of Dermatology, vol. i. No. 2.

† For full details of these procedures the reader is referred to the standard text-books of histology and microscopical manipulation.

‡ Am. Jour. of Syph. and Derm., July, 1870.

instrument held as a pen, a cut be made through the skin, there will result two incisions, including between them a thin slice of integument. This is afterwards removed (though it sometimes comes out with the instrument), and may be immediately examined under the microscope, a drop or two of some indifferent fluid being added. The operation may be facilitated and rendered painless by previously congealing the part with ether spray.

FIG. 2.

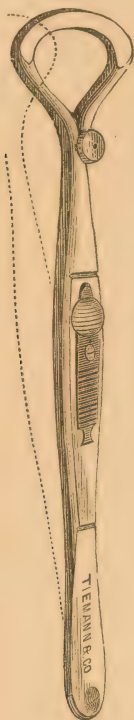


FIG. 3.



The sense of smell sometimes affords us information in connection with certain affections, *e.g.*, smallpox, favus, bromidrosis, etc. Its applications in dermatology, however, are as yet quite limited.

The sense of touch, on the other hand, renders us extremely valuable services. By it, in the first place, we are enabled to judge to a certain extent of the temperature of any portion of the skin. This point, however, can be investigated more accurately by means of Seguin's surface-thermometer (Fig. 3).

With this instrument the temperature of a skin-lesion of very limited extent may be readily ascertained, and comparisons with corresponding healthy points effected.

The sense of touch further enables us to judge of the comparative roughness and smoothness of different portions of the integument, and also of varying degrees of dryness or moisture.

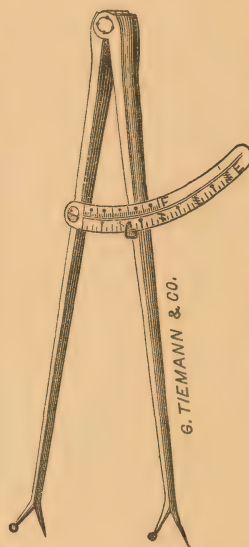
Until recently the *tactus eruditus* was to the gynecologist the all-important aid to the physical diagnosis of uterine disease, and even now affords him information not otherwise attainable. In like manner the "educated touch" can be made to render the greatest services to the dermatologist, and I never omit the opportunity of impressing upon students the desirability of using not only their eyes

but also their fingers in the study of the affections of the skin. If the mind be concentrated upon the finger-tips, with the eyes closed, and careful palpation of skin-lesions be practised, it is surprising how soon the sense of touch becomes educated to a point which enables it to furnish valuable information, occasionally detecting lesions or peculiarities that would otherwise have escaped notice.

Having practised this method to a considerable extent, I feel confident that it will amply reward all who take the trouble to cultivate it.

A very useful instrumental aid in the study of certain cutaneous phenomena is the *æsthesiometer*. I prefer the form here shown (Fig. 4). It is an improvement by Carroll upon Hammond's earlier instrument.

FIG. 4.



With this instrument the sharp points are used in the determination of the sensibility to pain, while the blunt ones serve for the detection of the acuteness of the tactile sense.

This instrument may also be conveniently employed for the measurement of the extent of patches of eruption, the divided scale being graduated in both inches and centimetres.

Dermatologists have not as yet availed themselves of some of the aids to investigation above noticed to anything like the extent which their importance warrants, trusting in most instances to their unaided senses; but for the future it should be remembered that those who depend upon good eyes alone, even with good brains behind them, will often fail to obtain valuable information which the less gifted observer, aided with instruments of precision, will readily acquire.

CLINICAL NOTES ON FORTY CASES OF CHOREA.

BY CHARLES K. MILLS, M.D.,

Philadelphia.

Chief of Dispensary for Nervous Diseases, University Hospital.

FOR sixteen of the cases included in the following table and appended notes, I am indebted to H. C. Wood, Jr., M.D., Clinical Professor of Nervous Diseases in the University of Pennsylvania. The rest have fallen under my own immediate care in private and hospital practice. I have resorted to the tabular method for the sake of convenience, and in order to give the most facts in the least space. Readers of the *Medical Times* will recall a brief but valuable "Report on Thirty Cases of Chorea," by Dr. George S. Gerhard, in the issue of the journal for January 3, 1874.

NO.	SEX.	AGE.	SEASON.	VARIETY.	APPARENT CAUSE.	HEREDITARY INFLUENCE.	TREATMENT.	RESULT.
1	F.	13	Spring.	Right.	Rheumatism.		Arsenic.	Marked improvement.
2	F.	10	Winter.	Right.	Rheumatism.		Arsenic, iron.	Cure.
3	F.	10	Spring.	Right.		Father intemperate.	Cimicifuga.	Cure.
4	F.	20	Spring.	Right.	Fright.	Father intemperate.	Gentian, valerian, arsenic, iron.	Cure.
5	F.	9	Spring.	General.		Cousin epileptic.		
6	F.	13	Spring.	General.	Rheumatism.		Cimicifuga.	Improved.
7	M.	11	Summer.	Left.		Mother melancholy.	Bromide of potassium.	Marked improvement.
8	F.	16	Spring.	General.	Hard work.	Father phthisical. Sister had chorea.	Bromide of potassium and chloral.	Cure.
9	F.	8	Summer.	General.	Fright.	Father insane.	Bromide of potassium, chloral, zinc, arsenic, iron.	No improvement.
10	F.	16	Winter.	Left.	Hard study.		Arsenic, iron.	Cure.
11	F.	15	Spring.	Larynx.			Arsenic.	No improvement.
12	F.	8	Winter.	Hands.	Fright.		Arsenic, iron.	Improved.
13	M.	8	Winter.	Left.		Mother phthisical. Father intemperate. Upper incisors notched.		
14	F.	11	Spring.	Both sides, but chiefly left.		Father intemperate. Upper incisors notched.	Arsenic, iron.	Cure.
15	F.	8	Spring.	Right, afterwards general.	Fright.	Father melancholy. Aunt and brother had chorea.	Arsenic.	Cure.
16	F.	21	Spring.	Arms and head.	Fright.	Upper incisors notched.		Improved.
17	M.	9	Spring.	Right.	Fright.	Father intemperate.	Gentian, valerian, arsenic, iron.	Cure.
18	M.	7	Spring.	Right.		Father intemperate. Upper incisors notched.	Arsenic.	Improved.
19	M.	6	Summer.	Both sides, but chiefly right.		Upper incisors notched.		
20	F.	8	Winter.	Left.		Upper incisors notched.	Arsenic.	Improved.
21	F.	7	Winter.	General.	Rheumatism.		Arsenic, iron.	Marked improvement.
22	M.	4	Spring.	Right.	Tinea capitis.	Father phthisical.	Cimicifuga, iron.	Cure.
23	F.	7	Spring.	General.	Rheumatism.		Arsenic.	Improvement.
24	M.	13	Spring.	General.	Rheumatism.		Cimicifuga.	No improvement.
25	F.	7	Spring.	Right.			Cimicifuga, iron.	Cure.
26	F.	15	Spring.	Right.	Establishment of menstruation.		Arsenic, iron.	Cure.
27	M.	14	Autumn.	Arms and head.			Arsenic	Marked improvement.
28	F.	12	Autumn.	General.	Fright.	Father intemperate.		
29	F.	15	Spring.	Right.	Rheumatism.			
30	F.	13	Spring.	General.	Hard study.		Arsenic, iron.	Cure.
31	F.	12	Spring.	Left.		Three other children had convulsions.	Arsenic, iron.	Improved.
32	F.	6	Spring.	Left.	Blow on head.		Arsenic, iron.	Cure.
33	F.	9	Spring.	General.		Paternal uncle had chorea.	Cimicifuga, cinchona, iron.	Improved.
34	F.	6	Autumn.	Left.	Rheumatism.	Upper incisors notched.		Cure.
35	F.	10	Autumn.	Left; chiefly left hand.	Rheumatism.		Arsenic, iron.	Cure.
36	F.	15	Autumn.	Right; chiefly right ear.	Establishment of menstruation.	Father phthisical. Aunt hysterical. Sister insane.	Arsenic, iron.	Marked improvement.
37	F.	13	Winter.	Right; chiefly right hand.	Rheumatism.	Mother nervous; has lost seven children under two years old.		
38	F.	9	Winter.	General.	Rheumatism.	Mother melancholy.	Bromide of potassium, iron.	Cure.
39	M.	17	Winter.	Right.		Sister had chorea.		
40	F.	17	Spring.	General.	Fright.	Father phthisical.	Bromide of potassium.	Cure.

Recapitulation.

Sex.—Males, 9 cases; females, 31.

Age.—Ten years and under, 20; from ten to twenty-one, 20.

Season.—Spring, 23; summer, 3; autumn, 5; winter, 9.

Variety.—General, 11; right, 12; chiefly right, 1; left, 8; chiefly left, 1; arms and head, 2; local (larynx, 1; hands, 1; eyes, 1), 3; not recorded, 2.

Apparent cause.—Rheumatism, 12; fright, 8; hard work, 1; hard study, 2; tinea capitis, 1; establishment of menstruation, 2; blow on head, 1; no cause discovered, 13.

Hereditary influence.—Males 7, females 17; total 24. I have not confined myself to a search for nervous diseases in order to determine the fact of hereditary influence, but, as the table shows, have carefully sought for any cachexiæ, diseases, or abuses in the ancestry or collateral relations of the patients. Notching of the upper incisor teeth—the so-called "Hutchinson teeth"—I have regarded as evidence of inherited syphilis.

Results of treatment.—Cures, 17; marked im-

provement, 5; improved, 8; not improved, 3; result not known, 7.

Remedies successfully employed.—In this recapitulation I include the cases cured and improved, 30 in all. Arsenic, 7; arsenic and iron, 12; arsenic, iron, valerian, and gentian, 2; cimicifuga, 2; cimicifuga and iron, 2; cimicifuga, iron, and cinchona, 1; bromide of potassium, 2; bromide of potassium and chloral, 1; bromide of potassium and iron, 1.

Doubtless some of the cases not reported as cures should be embraced in this list, as patients who get well often fail to return.

Arsenic was usually exhibited in the form of Fowler's solution, commencing with three or four drops thrice daily, and increasing the dose until about ten drops were reached, carefully watching, of course, for symptoms of poisoning. Iron was given as the bitter wine, the tincture of the chloride, or the syrup of the iodide, sometimes in separate prescriptions, and sometimes in combination with the other remedies employed. Cimicifuga was generally used in the form of the fluid extract, taking care to have a good article, and beginning with

doses of one-half fluidrachm, which were gradually increased, unless toxic effects were produced. The following formula was employed in two cases :

R Liq. potass. arsenitis, f3i;
Tinct. valerianæ,
Tinct. gentianæ comp., āā f3i.—M.

Sig.—Teaspoonful in water three times daily.

The compound tincture of cinchona was combined with the cimicifuga and iron in one case. Bromide of potassium was ordered in doses of from ten to twenty grains. Bromide of potassium and hydrate of chloral in combination were strikingly serviceable in one instance. The chloral was administered in amounts of five grains.

In four cases in which cimicifuga was first prescribed, it proved unsuccessful, or could not be tolerated by the patients. All of these cases afterwards improved under arsenical treatment. In one instance, cimicifuga in combination succeeded after arsenic and iron had failed.

With zinc, which is strongly recommended by many writers, I have had but little experience. The sulphate was given without success in two of the forty tabulated cases, one of which was afterwards greatly improved by arsenic, while the other did not yield to any treatment adopted.

General faradization and galvanization, as recommended by Benedikt, was temporarily used in three or four cases, without benefit; but I have not yet given electricity a fair trial. I have never tried the purgative plan of treatment. Cold affusion upon the spine was ordered as an adjunct to other treatment in four or five cases; but one cannot depend upon this measure being carried out strictly unless the patients are under constant supervision. Good, nutritious diet was always advised.

In the seventeen cases cured, the average duration of the disease before treatment was between five and six weeks, and under treatment also between five and six weeks, making the average entire duration about eleven weeks. The shortest time required to effect a cure was two weeks; the longest, four months. Two cases were cured each in three weeks.

The following are some points of interest not brought out in the table:

One previous attack had occurred in ten cases; two in one case. In two cases the disease had persisted for two years, and in one for three, with brief intervals of improvement. In twenty-five cases the disorder came on gradually; in fifteen the onset was sudden, so far as could be judged from the statements of patients and their friends and relatives.

Cardiac murmurs were observed in seven cases, five of which were associated with rheumatism.

Establishment of menstruation is given in the table as the apparent exciting cause in two cases. In eleven others the ages of female patients ranged from twelve to seventeen years. In four of these eleven I have noted the fact that the chorea came on shortly after the initiation of the menses, but have recorded rheumatism as the apparent cause, a rheumatic history having been discovered.

In five cases parents reported that the choreic movements continued during sleep.

One of the cases had formerly been a somnambulist.

Headache was noted in eight cases.

Spinal tenderness was found in four cases out of ten examined for this symptom: in two in both the dorsal and lumbar regions, in one in the dorsal, and in one in both the cervical and lumbar.

In four cases partial paralysis was observed and recorded: of the right side, of the right arm, of the right leg, and of the left arm, each in one case. Unfortunately, my notes are not full in regard to paresis and paralysis.

I will briefly detail half a dozen cases which present points of special interest in regard to such matters as hereditary influence, the effects of or resistance to treatment, association with hysteria, and peculiar localized movements.

Case I.—C. K., æt. 16, who had been overworked in a factory, fell under my care May 4, 1871. An attack of general chorea had come on a few days before. The so-called "insanity of the muscles" was as well illustrated in this case as in any which I have ever seen. Her movements were exceedingly violent and grotesque. She could not walk nor stand, and a bed had to be made for her on the floor. At first one leg, then another, and then an arm, would be suddenly hurled into the air; the whole body would be tossed upward; the head moved and twisted in every direction possible; and she grimaced and contorted her countenance frightfully.

This girl's father was a consumptive, and one of her sisters had had a severe attack of chorea.

Under the use of bromide of potassium, gr. x, and hydrate of chloral, gr. v, every three hours, she got well in two weeks, the shortest time in which I have known recovery take place, although the case was one of the worst which has fallen under my notice.

Case II.—K. S., æt. 8, a bright, precocious-looking girl, was first seen by me June 24, 1871. One week before, she had been frightened at school, from which time she was restless and began to twitch. She got rapidly worse, and when I first saw her was suffering from severe general chorea. She could not stand. Her arms and legs and head were in a constant state of motion. Articulation was almost impossible, and deglutition was difficult.

The father of this patient was insane, and had at one time been an inmate of the Philadelphia Hospital for the Insane.

I treated her for nearly four weeks with bromide of potassium and chloral, with sulphate of zinc, and with arsenic and iron, but with no persistent improvement, when she was sent to a hospital. In the neighborhood in which this child lived was a sausage-factory, which, when in active operation, kept the doors and windows, and, in some instances, the buildings around it, in a constant state of pronounced vibratory motion, and thus seemed to aggravate the symptoms of the disorder and interfere with recovery.

Case III.—S. M., æt. 16, was first seen January 28, 1874. She had been going to school and studying hard until recently. Five weeks before coming for treatment, it was noticed that she talked a little "thick." Three weeks later, she began to toss her head, throw her left arm about, and walk in an irregular, stumbling manner, jerking the left leg out from the body. On one occasion she burned her left hand on a stove, because of her inability to govern her motions. She grimaced almost continually; and her mother stated that she was fretful, and laughed or cried for the merest trifles. I could discover no spinal tenderness. The

sclerotic coat had a peculiar bluish tinge. Now and then for several weeks she had experienced a little pain in the arms, probably rheumatic. For a few days, at intervals, she had pain in the foot and in the knee. An endocardial murmur was detected. Her appetite and digestion were good, respiration easy, bowels and water regular. Her menses had been established when she was fifteen, and had appeared regularly. No hereditary taint could be traced. Her father died when she was seven years old, of typhoid fever; her mother was living and well, and she had two brothers and four sisters, all of whom were healthy.

The case was one of pretty well marked left hemichorea, and I at once put her on Fowler's solution, four drops three times daily, which was increased in dose until eight drops were given. I also prescribed tincture of the chloride of iron, ten drops three times daily. Under this treatment the patient improved constantly, and was cured in four weeks.

Case IV.—A. P., æt. 15, whose father and mother were both living and well, came under observation March 11, 1874. She had been a healthy child until she was eight years old, when she had an attack of inflammatory rheumatism. One year later, she was frightened by a fire occurring in the house, became nervous, and had been so ever since. About ten months before applying for treatment, she gave evidences of marked chorea, twitching various muscles, and throwing her limbs about wildly. She got so bad that she could scarcely be held, and was treated by several physicians. Her menses had appeared for the first time within a few weeks. She had not been entirely free of choreic symptoms up to the time of presenting herself; and about three weeks before this period the most striking and peculiar symptom of the case appeared. This was a short, hoarse, barking cough, which had continued day and night without intermission, excepting when the patient was intently reading or was fast asleep. It seemed to correspond to the tussis hystérica or nervous cough of writers, and was, apparently at least, involuntary. No disorder of the lungs could be determined by physical exploration. The patient complained of soreness of the throat; and the fauces and tonsils were found somewhat inflamed, but this condition may have been secondary,—the result of irritation produced by a cough purely nervous.

The patient had been troubled with constipation ever since she was about eight years old. She would often go five or six days without an evacuation of the bowels, and on one occasion had gone as long as thirteen days. She frequently had pains in the abdomen, and examination showed the existence of fecal accumulations.

She was placed upon Fowler's solution, and a pill of the extracts of belladonna, colocynth, and gentian; and she was also ordered cold affusion to the spine, and a gargle of chlorate of potassium; but she only remained under observation about ten days, during which time I could discover no improvement of any moment in the symptoms.

In this case chorea and hysteria were probably associated, a combination of disorders which my experience would lead me to believe is not uncommon. Large quantities of limpid urine were voided by the patient daily; a secretory derangement which, it is well known, is generally present in hysteria.

Case V.—S. A. W., æt. 11, a school-girl, fell under my care April 1, 1874. Two months before, her mother first noticed at the table that she could not use her left hand properly. She would let things drop. In going around the house, she walked in a strange, irregular manner, throwing her limbs about somewhat wildly. She could not sit still. She had been getting gradually worse. She had choreic twitchings of the fingers and

limbs of both sides, but more particularly the left. The left hand and foot showed some loss of power; she dragged the latter a little in walking. Her face was not affected; and she could speak, swallow, and thrust out her tongue properly. She had occasional frontal headaches. Spinal tenderness was found over the sixth and seventh dorsal and first lumbar vertebræ. No history of rheumatism, no heart-murmurs, and no exciting cause could be discovered.

Hereditary influence seemed to be a highly important factor in this case. The father of the patient was a nervous, excitable man, subject to fits of melancholy; a brother had had chorea, as had also the father's sister, when about sixteen years of age.

She was ordered Fowler's solution, beginning with four drops three times daily, and increasing, and also the bitter wine of iron. She was discharged, well, April 25, having been under treatment about three weeks. The arsenical preparation was stopped for two or three days during this time, because of puffiness of the eyelids and pain in the stomach.

Case VI.—M. H., æt. 15, a school-girl, came under observation December 29, 1874. Her father has marked symptoms of phthisis. Her father's sister is hysterical. She has one sister, thirteen years of age, who is insane.

Her menses came on six months before presenting herself for treatment, since which time she has been nervous and delicate. She was quite well before menstruation began. During the last two months she has menstruated every two weeks instead of every four. She presents no history of rheumatism or fright. Her bowels are regular and appetite good. She has occasional headaches. She went to school until three weeks ago, and was a good student. She looks dejected and miserable, and says that she feels melancholy.

Two months ago her right ear began to twitch, or move up and down. Her nostrils and upper lip also soon became affected with twitchings; and within a few days slight choreic movements had extended to the entire right side of the body.

The movement of the ear was quite peculiar; it continued nearly all the time, even when the patient's attention was not directed to the part, according to the statements of her mother. The attollens aurem or superior auricular muscle, whose office is the elevation of the ear, and which, with the other extrinsic muscles of the ear, generally has no active vocation in the human species, although important in some of the lower animals, was energetically brought into play in this case.

The ear was constantly moved up and down, sometimes slowly and sometimes rapidly. The act seemed to be partially under the control of the will. By a strong effort the left ear could also be moved very slightly in the same direction. The mother of the patient did not think that the movement continued during sleep.

The patient was ordered to be kept from school, where the motion of her ear drew the attention of the scholars to her, and thus made her more nervous. Good food, pure air, and pleasant company were also advised. The following prescription was given:

R Vini ferri, fʒvi;
Liq. potassii arsenitis,
Syrupi, aa fʒi;
Aqua, fʒi.—M.

Sig.—Teaspoonful in water after meals; the amount to be gradually increased.

Under this treatment, her general health improved rapidly. All the movements, except those of the right ear, ceased entirely. At the time of making these notes, two months after the girl was first brought for treatment, the motion of the ear still persists, although the

patient seems to be quite well in other respects. For a short time—after she had been under treatment about a month—the ear did not work unless especial attention was called to it; but the local affection, although improved, has not been cured.

A CASE OF RETINAL HEMORRHAGE.

BY SWAN M. BURNETT, M.D.,

Knoxville, Tenn.

MR. D. was sent to me on the 20th of June, 1874, by his physician, on account of ocular trouble. He had been in bad health since the summer of 1873, when he had cholera, and, immediately after, what his physicians called typhoid fever. Three days before I saw him, while in the country, still quite weak and feeble, he stooped down to pick up a small bit of wood, and, on rising up, found himself totally blind in both eyes. In the course of a few seconds vision in the right eye returned, but a large scotoma remained in the left, which was the cause of his visit to me. I found central vision entirely lost. The scotoma at the distance of six feet was about one and a half feet horizontally and one foot vertically at its widest part. At first it appeared black to him, but at this time it has a reddish tinge. It is of a pyramidal shape, the base occupying the centre of the visual field, while the apex points outwards and downwards.

An ophthalmoscopic examination revealed an extravasation of blood in the retina, having the shape he gave to the scotoma. The apex of the pyramid lay just below and a little beyond the nasal edge of the optic disk, while the base was about two diameters of the disk distant from the temporal edge. The upper edge of the pyramid lay at the lower edge of the disk. The color of the effusion was dark red; it was non-striated, and its boundaries were not sharply defined, especially the lower one. The retinal vessels seemed to lie under it. At the apex was a large vein which was apparently the origin of the hemorrhage. The fundus was otherwise normal. No treatment was advised.

On the 5th of July I examined the case again. The extravasation was fully one-third smaller, and had contracted about equally in all its dimensions. There was now a space between its upper edge and the edge of the optic disk, and in the space were seen some vessels passing beneath the clot and emerging on the other side. The corners of the pyramid were more rounded, and the edges were more clearly marked. No appearance of striation. Subjectively the scotoma has considerably reduced, and is not so dense, but still has the reddish tinge.

After this the patient went to the country, and I did not see him again for a month. By this time the scotoma had entirely disappeared, leaving a very slight haziness in the place in the visual field it had occupied. He reported that after the last examination it had gradually reduced in size and lessened in density until it reached its present condition.

An ophthalmoscopic examination showed nothing at the former site of the effusion, but a very little turbidity of the retina.

He has had up to this time no return of the extravasation.

Our text-books on ophthalmology say very little about retinal hemorrhage, except as a concomitant of retinal hyperæmia or inflammation. Some, it is true, mention the fact that it may occur in diseases of the heart and kidneys, and in degeneration of the vascular walls, and in menstrual derangement,

but none give it any considerable attention. Dr. Bull, of New York, gives in the *American Journal of the Medical Sciences* for April, 1874, the most elaborate article on the subject to be found in our more recent English literature, while Pagenstecher and Mandelstanow in Germany have reported and commented upon a large number of cases occurring in the clinic at Wiesbaden.

Dr. Bull advances the opinion that retinal hemorrhage is to be looked upon often as a precursor of cerebral apoplexy, and cites three instances under his own observation, and some from other sources, where this was the case.

Where the extravasations are numerous and oft-recurring, I have no doubt that cerebral hemorrhage will be likely to follow retinal effusion, for under these circumstances the condition of the vessels and circulation would be such as to render an extravasation liable to occur at any point and at any time; but I do not see why a single effusion, from perhaps a temporary cause, should lead us to look for subsequent cerebral hemorrhage.

His heart was examined by myself and several other physicians, and no evidence of organic disease was discovered. An examination of his urine failed to show evidence of kidney-trouble.

One feature in our case deserves notice. Though the extravasation was in the anterior layers of the retina, as evidenced by the passage of the retinal vessels under it and the non-implication of the percipient retinal elements; it did not have that striated appearance which extravasations in that position are generally represented as having. It will also be observed that the scotoma, except for the first few hours, did not have a perfectly opaque appearance, but was of a reddish tinge. In such cases, it seems to us, the color of the scotoma might have some prognostic importance. In our case the reddish tint of the scotoma showed that the retinal elements behind the extravasation must be intact, because they were affected by the red rays transmitted through the blood-clot; otherwise the scotoma would have been perfectly black.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF PROF. D. HAYES AGNEW, M.D.

Reported by L. B. BALDWIN, M.D.

FEMORAL ANEURISM—DIGITAL COMPRESSION—CURE IN THIRTY-FOUR HOURS.

JOSHUA P., colored, married, æt. 36, male, native of Delaware, and a resident of Philadelphia, was admitted to the hospital December 26, 1874. His own statements were to the effect that he had always enjoyed perfect health, and that he had for many years faithfully performed the duties of his position,—that of a coachman. Six weeks previous to admission, while attaching horses to a wagon, he by accident ran against the iron end of the swingle-tree, striking the inner side of the thigh. He experienced severe, agonizing pain at the point injured for about five minutes; there was

no punctured wound or abrasion of the surface, and he asserts positively that there was no swelling. He continued his duties for seven days, when he complained of severe pain on the inside of the knee. Four days later, or ten days from the accident, he discovered the pulsating tumor for which he now asks admission to the hospital.

Upon making a physical examination of the tumor, the first thing that strikes our attention by mere inspection is the heaving, pulsating character which the tumor possesses. On closer inspection, aided by palpation, we find that it is in the line of the femoral artery; that it pulsates forcibly, the dilatation being equal in all directions at every pulsation, which corresponds with the radial pulse; that it ceases to pulsate and diminishes in size when the artery is pressed upon above the tumor; and that, upon auscultation, is heard the almost characteristic aneurismal murmur or bruit. Its position is on the line of the femoral artery of the right leg, seven and a half inches below Poupart's ligament, which places it below Scarpa's triangle, outside the sartorius muscle, and just above the canal in the adductor magnus. It is the size of a goose-egg. There is no unnatural heat or discoloration in the part. It is fusiform in shape, and evidently due to contusion.

He was presented to the class on January 6, 1875, and the subject of aneurisms and the various methods of treating them considered at some length. The preference was given to digital compression, notwithstanding that our aneurism was fusiform, the one above all others acknowledged to be most difficult to cure by this method.

The patient having been prepared since admission by absolute rest in bed, with the leg elevated to an angle of 45°, restricted diet, and a heart-sedative,—tinctura aconiti radialis, gtt. v, t. d.,—digital compression was commenced by gentlemen from the Medical Department of the University on January 6, 1875, at 7.40 P.M., and maintained for thirty-four hours. The first twelve hours the artery was only partially controlled, in order to favor the collateral circulation. He bore it without a murmur until 1 o'clock P.M. on the 7th, when he complained of pain, and was given a hypodermic of morphia, gr. $\frac{1}{4}$.

At 3.30 P.M., Bellingham's compressor was adjusted below the origin of the profunda, and caused so much pain as to make it necessary to remove it at the end of an hour and fifteen minutes. Thirty-five drops of tincture of opium were given during this period.

Digital compression was recommenced, and at 10.30 P.M., or twenty-six hours and fifty minutes from the time pressure was first applied, the pulsation, almost suddenly, entirely ceased. The pressure was continued, however, for seven hours and ten minutes longer, making thirty-four hours in all. The man's condition remained good throughout; there was no marked depression, he slept at times, took nourishment with relish, and, without exception, all the organs of the body performed their various functions satisfactorily and with ease to the patient.

The temperature of the limb and foot remained almost normal during pressure. He was kept at perfect rest until January 16, 1875, when he was discharged from the hospital cured.

INTERNAL USE OF SEA-WATER.—Dr. E. Lisle (*Bulletin Général de Thérap.*, February 15) lauds sea-water as a most valuable remedy in strumous, dyspeptic, and anæmic cases. He has made use of it in bread prepared with fresh brine, and also in a combination of brine and syrup, and brine, rum, and syrup with some flavoring essence.

TRANSLATIONS.

EXTRA-UTERINE PREGNANCY (Dr. J. Alonzo y Rodriguez: *El Anfiteatro Anatómico Español*, Madrid, Spain, August and September, 1875).—The patient was aged 39 years, of medium size, multipara. In July, 1858, one month after parturition, she had a sudden suppression of the lochia and milk, and became quite ill. There was much pain and tenderness in the right iliac region, which was treated as ovaritis. The symptoms were alleviated; but accessions of pain with constitutional disturbance were frequent in the same region. In August, increase in size was noticed; heat and redness appeared, and palpation was exceedingly painful. Alarming symptoms of an adynamia came on. Fluctuation was noticed in the tumor August 26, and a small quantity of pus was evacuated by puncture.

A few days later, a portion of the skin around the opening became gangrenous, and a mass of hair connected with macerated skin and pieces of a foetal skull were discharged. A free discharge was maintained, antiseptics were continued, and quinine, with other tonics, freely administered. For a month and a half pus and pieces of the foetal tissues were discharged, and then the opening partially closed by cicatricial tissue, eighteen centimetres in circumference, situated at the junction of the right iliac and hypogastric regions, but leaving a small fistulous opening from which there was a slight discharge up to 1873; though the patient was the previous four years in excellent health and about the house doing much work. In the latter part of 1873 she became again pregnant, and everything progressed well until the fifth month, when she consulted me for pain in the hypogastrium and sacrum. I found anterior obliquity of the uterus, and ordered an abdominal supporter, which relieved her distress, and she was able to continue her usual avocations. The pregnancy progressed favorably, with very little discomfort, but the last two months she was confined to her bed, owing to the distention and weakness of the ventral walls. At the end of the eighth month the distention of the cicatrix produced sloughing of the skin; but ointments and tonics improved her condition, so that the part soon healed. Soon after this the patient had several attacks of uterine pain simulating labor, which passed away under calmate treatment.

Active labor came on May 21, and a male child, between eight and nine months' development, was expelled, but died four hours later. Immediately after the happy childbirth, the last expulsive pain ruptured the abdominal parietes. The cicatrix was torn through, causing an opening eight centimetres in diameter, through which the greater part of the small intestines had escaped.

I hurriedly replaced them, and had the woman retain them with her hand; shortly afterwards we closed the rent by quilled sutures, passing the needle through all the layers of the abdomen, through the sound skin around the cicatrix, so that the serous surfaces of the peritoneum were brought in contact. A compress, covered with simple cerate, was laid over all, and the holy sacrament administered in view of the dangers of peritonitis, not only from the operation, but also from the exposure and manipulation to which the parts and viscera had been subjected.

The patient's face was pallid, extremities cold, pulse small and feeble. There were slight headache, increased thirst, anorexia, and tendencies to syncope.

She was ordered panada, a drink of barley-water, and a teaspoonful of simple antispasmodic mixture; to keep absolutely quiet upon her back, with the inferior extremities flexed upon the trunk.

At our afternoon visit the skin was of normal temper-

ature, the lochia was flowing scantily, and other symptoms were favorable. Treatment was continued, and belladonna ointment was applied over the abdomen for the after-pains.

The next day all the alarming symptoms of peritonitis had supervened, and thirty-six leeches were applied to the abdomen. The patient went through a long and perilous illness, but was ultimately restored to health.

She has continued well, without any suffering from her previous disaster, up to the present time.

W. H. W.

CONGENITAL ELEPHANTIASIS ARABUM, WITH PLEXIFORM NEUROMA (*Centralblatt*, January 23; from *Arch. für Klin. Chir.*).—The case was that of a man 25 years of age, in whose family the disease was hereditary. At birth the patient had a small tumor on the back, which began to grow from the fifteenth year. At his admission into the hospital this growth sloped down from the neighborhood of the lower dorsal vertebra to the right os ilium, as an upper boundary, and from the ramus of the ischium to a hand-breadth below the trochanter major as a lower boundary, hanging down in a purse-like form to the bend of the knee.

Several partial operations were undertaken for the cure of the tumor, which, however, grew again, and the patient finally died of exhaustion and thrombosis of the middle cerebral artery.

Post-mortem examination showed the anterior branches of the right lumbar plexus filled with or changed into knotty tumors, of which some were observed as far as the spinal canal. Even that part of the sympathetic which was connected with the lumbar plexus was included in these changes. From this point outwards there were cords the size of a crow-quill, with bead-like enlargements which could be followed to the centre of the tumor. Similar appearances were found on the branches of the crural nerve. Section through the tumor showed this growth to be situated between the cutis and the fasciæ, pressing in between the fatty layers, and that these became more and more separated from one another towards the centre of the tumor, finally disappearing.

Fine fissure-like vacuoles or hollows were everywhere observed, which were filled with clear, light, coagulable fluid. Microscopic examination showed an increase in the cells of the adventitia, noticeable in the vessels reaching from the fascia to the adipose layer. These cells were wandering cells, or more frequently embryonal connective-tissue cells, the latter lying more thickly near the convolutions of the sweat-glands. The tumor itself was composed of embryonal connective tissue, which became more compact, retaining always, however, a lamellar wall with small vacuoles or spaces. Injection of these spaces showed that the sebaceous and some sweat-glands were surrounded by sac-like lymphatic sinuses, which emptied into the superficial lymphatic rete of the cutis. The knotty neuroma consisted principally of connective tissue, with more or less numerous medullary nerve-fibres. Near these appeared a decided new growth of non-medullated nerve-fibres, and, finally, in the neuromata, lying near the dura mater itself, ganglionic cells. X.

ULCERS OF THE LEG IN CONNECTION WITH HEART-AFFECTIONS.—Dr. G. Marcano (*Le Progrès Médical*, January 16), having had under observation a number of patients affected with ulcers of the leg, was led to study the etiology of these affections. His observations have brought him to the conclusion that many so-called simple ulcers are caused by troubles of the circulation. Not only varicose veins, but frequently some alteration of the central organ of circulation, may bring about the same effect.

In illustration of this theory, Dr. Marcano brings forward two cases of simple ulcer of the leg, which after remaining under treatment some time succumbed to some heart-trouble.

In the first of these, the ulcer, though originally attributed to a blow, seemed to depend on the condition of the heart for its varying state of progress. While the cardiac affection, under the influence of hospital treatment, was relieved, the ulcer continued to cicatrize rapidly.

A sudden and severe exacerbation of the former was, however, immediately accompanied by cessation of improvement on the part of the ulcer; the granulations of the latter became pale and flabby, the discharge sanious, and an eczematous condition of the surrounding skin supervened. The case resulted fatally, as did the second case which is recorded by Dr. M., in which all the symptoms were identical, but there was no history of the slightest previous injury to the leg.

From his experience in these and many similar cases, Dr. Marcano concludes that: 1, affections of the heart predispose to ulcers of the leg; they may even cause them; 2, these ulcers, which may be called cardiopathic, present a certain degree of frequency; 3, no relation has been noticed between the ulceration and the symptoms noticed in the heart. The cardiac affection, whatever it may be, seems only to play its etiological part by means of the permanent œdema which it produces in the legs, and which is always observed to precede the ulceration. X.

DANGERS OF ABSORPTION OF PHENIC ACID.—The carelessness with which non-professional journals take up certain popular recipes is not always without its dangers, and especially since these often come into the hands of children. For instance, there appeared lately in one of the public prints an article upon the poison of vipers, which recommended that carbolic acid should immediately be introduced within the wound, the acid to be mixed with alcohol in the proportion of two to one. Observe the off-hand manner in which a toxic agent is spoken of, as if it were the most inoffensive thing in the world. In order to try the experiment, a cat was selected upon whose skin, denuded of hair alone, a saturated solution of carbolic acid in alcohol, mixed with an equal quantity of water, was rubbed. This produced no effect; but when the same solution was rubbed into a scratch upon the nose two or three times, the animal immediately fell into convulsions, and very shortly succumbed. Prussic acid could not have acted more promptly. The moral of this experiment is obvious. —*L'Abeille Médicale*, No. 3, 1875; from *Revue de Thérap.* X.

ACTION OF CANTHARIDINE.—The *Tribune Médicale*, No. 339, 1875, contains a note on this subject read before the Société de Biologie, of which the following is an abstract. It has long been believed that cantharidic preparations in general, and cantharidine in particular, have a sort of elective attraction for the genito-urinary organs. To prove, however, that cantharidine introduced into the stomach passes into the blood, and that it passes in sufficient quantity to cause grave lesions, eight-tenths of a grain of cantharides was administered to a healthy dog by the stomach. Reiterated vomiting of white, frothy matter expectorated with difficulty and soon becoming sanguinolent, dilatation of the pupil, tendency to immobility, and stupor, resulted. Under these conditions the crural artery of this dog was made to communicate with that of another, and, soon after, dilatation of the pupil was observed in the second animal. Slight dyspnoea was the only other symptom during life; but, after it had been killed, post-mortem examination showed generalized congestion of the lungs, sub-pleural ecchymoses, together with a number of emphysematous

nodules. Large ecchymoses were also observed on the surface and within the ventricles of the heart, as well as localized apoplectic nodules in the liver, injection of the intestinal mucous membrane, congestion of the cortical renal substance, and injections of the vesical mucous membrane, particularly at the neck. X.

DEEP LIPOMA OF THE ARM.—The *Gazette Médicale de Paris*, January 2, 1875, contains an account of this unusual form of lipoma, which presents a certain amount of interest as well from a diagnostic as from a pathological point of view. The tumor was situated under the biceps, and was attached deeply to the periosteum of the humerus. It was removed by a cruciform incision and careful dissection with the knife and fingers.

The difficulty in diagnosis lay in its close resemblance to a cystic tumor or an abscess, but the exploring trocar settled the question before the operation was attempted. X.

THERAPEUTIC NOTES.

UNCHANGEABLE SOLUTION OF QUINIA FOR HYPODERMIC INJECTIONS.—

R Sulphate of quinia, 15 grains;
Lactic acid (concentrated), 15 grains;
Water, sufficient to make 60 minims;
Bisulphite of sodium, $\frac{1}{2}$ grain.

When the solution of the quinia is perfect, add the bisulphite of sodium, and transfer to a well-corked phial.—A. P. Sharp, in *Proc. Am. Pharm. Assoc.*, 1874.

IN PROSTATIC GLEET.—

R Copaibæ, ℥ii;
Ess. cinnamomi, ℥xx;
Mucilaginis, ℥xv;
Aquæ, f℥i.—M.

Sig.—Four times daily.

IN THE COUGH OF CHRONIC PHTHISIS.—

R Morphiæ acetat., gr. ii;
Liquor. atropiæ (B. P.), ℥vi = gr. $\frac{1}{10}$ atropia;
Acid. hydrocyanic. dil., ℥xxvi;
Syr. pruni virgin. ad f℥iss.—M.

A measured drachm is to be taken, unmixed with water, once to bed, and once again during the night if necessary.

PRESCRIPTION OF CUBEBS FOR PHARYNGEAL DIPH- THERIA.—

R Pulv. cubeb. (fresh), 3x;
Glycerinæ, 3xviii;
Mel. despumat., 3viiss;
Aq. menth., 3iii 3i;
Gum. tragacanth., gr. xv;
Tinct. ol. menth. pip., gtt. viii.—M.

Dose for a child, one teaspoonful every hour; the broken doses producing the desired effect without irritating the digestive tract.—*La Tribune Médicale*.

CARMINATIVE MIXTURE FOR YOUNG INFANTS.—

R Sodii bicarbonat., gr. iss;
Spirit. ammon. aromat., gtt. ii;
Glycerinæ, gtt. v;
Aq. menth. pip., f℥ss.—M.

PILLS OF ALOES AND IPECAC.—

R Aloes, gr. i;
Ipecacuanhæ, gr. $\frac{1}{4}$;
Ext. gentianæ, gr. iss.—M.

Ft. pil. no. i. Dose, one to two pills.

TRANSPARENT TURPENTINE LINIMENT.—The following preparation is so composed that, instead of making the half-dissolved cloudy mixture usually seen where oil of turpentine has been mixed with tinctures, it forms a perfectly clear solution:

R Ol. terebinth.,
Tinct. aconit. rad.,
Spiritus camphoræ, āā 3ii;
Tinct. iodinii,
Carbon. bisulph., āā 3i.—M.

This mixture separates very quickly into two layers; but if the following substances are added it becomes perfectly clear:

Soap, transparent glycerin, in fine shavings, $\frac{3}{4}$ oz.:
Otto of cedar, 1 $\frac{1}{2}$ oz.
or otto of cajeput, 1 oz.

Either of these may be used, and if the bisulphide of carbon is deodorized, the liniment is not offensive to the smell.

ADMINISTRATION OF CASTOR-OIL.—M. Potain recommends, as the best method of concealing the unpleasant flavor of castor-oil, to squeeze half an orange into a glass, and pour the oil upon it; then, avoiding all disturbance of the liquids, to squeeze the juice from the other half of the orange carefully over it. The oil, thus enclosed between two layers of orange-juice, can be swallowed without the least perception of its flavor.

LINIMENT FOR SCABIES.—Dr. Clemens gives the following formula:

R Acid. arsenios., gr. i;
Potassii carb., gr. xv;
Spiritus saponis, f℥iii;
Aquæ, f℥iii.—M.

The liniment to be rubbed twice daily on the part affected. It does not harm the youngest child.

PILLS OF IODIDE OF POTASSIUM.—

R Potassii iodid., 3iss;
Pulv. althææ, 3iss;
Syrupi, q. s.—M.

Ft. pil. no. xii.

ANTI-GASTRALGIC PILLS.—

R Ext. belladonnæ, gr. vi;
Quinæ sulph., 3i.—M.

Ft. in pil. no. xxv.

Sig.—Thrice daily, in the treatment of gastralgia.

PILLS OF ACONITE.—

R Ext. aconiti, gr. vii;
Confect. rosæ, q. s.—M.

Ft. in pil. no. xx.

One to two, morning and evening, in the osteocopic pains of syphilis, combined with the usual anti-syphilitic treatment.

METHOD OF ADMINISTERING RAW MEAT.—

Raw meat, scraped, 3 drachms;
Pulverized sugar, 12 drachms;
Claret wine, 6 fluidrachms;
Tincture of canella, $\frac{1}{2}$ drachm.

BROMIDE OF CALCIUM IN THE NOCTURNAL PAINS OF SYPHILIS.—Dr. Galozzi and Prof. Gamberini have employed the bromide of calcium as a sedative in the nocturnal pains of syphilis, with considerable success. The formula employed by them is the following:

R Calcis bromid., gr. iv ad ix;
Aquæ destillat., 3iv;
Sacch. alb., 3ii.

The dose to be increased by 1 $\frac{1}{2}$ gr. daily.

PHILADELPHIA MEDICAL TIMES.

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EDITORIAL.

THE UNIVERSITY OF MICHIGAN.

WE have examined the new calendar of the University of Michigan with mingled satisfaction and disappointment. Under the government of the President, James B. Angell, LL.D., the institution has grown and prospered until in the last year it had eleven hundred and ninety-one students, distributed as follows: four hundred and seventy-six in the Department of Science, Literature, and the Arts, three hundred and seventy in the Medical Department, and three hundred and forty-five in the Law Department. As the Medical Department is the only one in which our readers are especially interested, we shall confine our remarks to it. The position which this department holds is, unfortunately, a peculiar one in this country. As it is endowed, its professors are independent of the students, and the fee for its courses is so small as to be practically nothing. An institution of this character must be either a great blessing or a great curse to the community in which it dwells. The grandest conceivable school of medicine is one whose instruction is as free as air, but whose degree is unattainable except as the result of thorough culture in the science and practical training in the art of medicine,—or, in other words, a school which affords opportunities to rich and poor alike, but makes its diploma valuable because difficult of acquirement. On the other hand, a medical institution which offers free instruction and a diploma of easy attainment comes

at once into competition with the ordinary medical colleges, forces them to lower their fees, and, what is even more successful in obtaining classes, their standard of graduation, and of necessity enters itself upon the race in which the most debauched institution will win. It attracts the ignorant in that it offers them, without cost in money or labor, entrance to a profession which is at least supposed to be honorable and to afford a good livelihood to its votaries. The annual overflow of such a medical college must be even more deadly than that which issues in the spring-time from the average school of the country.

The regents of the University of Michigan have had placed in their hands an enormous power for good or for evil. With sorrow we are forced to acknowledge that in the past they have failed to appreciate their true mission. Smitten seemingly with the madness for huge classes, they have lost forever the opportunity, which for years lay in their grasp, of making the University of Michigan the most famous medical school of the country. So far from their large classes being a glory to them, they are the badge of their shame and failure. It is not the number of its graduates, but their training and their character, which stamp an institution of learning.

Judging from their published catalogues and the graduates who have come East, their standard of graduation has in the past been as low as that of our Eastern schools, or even lower, and their diploma to-day is certainly of less rather than of more value than that of our institutions. We have no hesitation in affirming that in the past the University of Michigan has been a grave injury to the profession. It is probable that the errors of the regents have largely been those of ignorance; not one of the board is fitted by education to appreciate the needs of the profession, and the low standard of medical education which has so long prevailed in the United States has produced a murrain of blindness which affects many even of the leading medical men of the day.

It is very probable that the author of the calendar did not perceive the grim humor of the statement—"The University of Michigan has aimed to elevate the standard of medical attainments, as will appear by consulting the requirements for medical degrees." That it has been a very poor marksman we propose to show by consulting the "requirements for the medical" and other "degrees" as contained in the pamphlet before us.

No profession on earth requires for the proper fulfilment of its duties wider or more thorough culture than does that which we serve. Almost

all the sciences underlie it, and almost all the arts bear tribute to it. A fair knowledge of chemistry, physics, anatomy, physiology, and some acquaintance with the natural sciences, are absolute necessities to him who would master the secrets of clinical medicine and surgery, and beyond these is a vast mass of science- and art-knowledge in regard to the natural history of diseases, their production, pathology, cause, and treatment.

We repeat, no human pursuit calls for a greater culture, as none lays a greater responsibility upon its votary, than does ours. Engineering certainly requires no more, and the necessities of the pharmacist in the way of knowledge are a mere bagatelle to those of the physician. How, then, does the course of instruction prescribed for these professions compare with that ordered for the medical student? In making these comparisons, we want first to dispel a delusion, which every one knows to be such, but which is constantly put forward to cover the absolute nakedness of our system of medical teaching.

We are told everywhere that three years of study with a preceptor is a necessity for graduation in the medical school. It is the year and a half of study in the country, which is supposed to precede the study at the college, that constitutes the delusion of which we speak. The professors in our colleges must know that in the great majority of cases this previous study has no real existence, or has amounted to nothing, so that the men come to the city perfectly ignorant of the most elementary principles of our science. The three years is a mere blind for decency's sake.

What faculty would dare to examine these applicants in the rudiments of medical science, even so far as to test their knowing a femur from the humerus? The period of study commences, in nine cases out of ten, when the candidate joins the college. On this basis let us then compare the requisites for graduating in engineering, in pharmacy, and in medicine, in this university whose aim is "to elevate the standard of medical attainments."

In civil or mining engineering the candidate for admission is examined in the English and French languages, geography, history, mathematics, natural philosophy, botany, zoology, geology, and geometrical drawing. In medicine, if the candidate cannot exhibit "a certificate of graduation from a respectable high school, academy, or college, he shall be examined in the *elementary* branches of an English education." In engineering, after having passed his examination, the student is required to study *four years*. In medicine he must attend *two*

full courses of lectures of *six months* each. "Very fine," some one will say; "but, then, civil engineers deal with questions involving property, doctors with questions involving nothing more valuable than life; and, as people will pay much more cheerfully when their property is concerned, civil engineers can afford to educate themselves, and ought to be fitted for their business." True; but then the University of Michigan aims "to advance medical attainments."

Pharmacy, however, is *not* a more lucrative pursuit than medicine, and, as already stated, is greatly below it in the amount of its underlying science and art. In the Department of Pharmacy in the University of Michigan, the student who desires to enter is examined more widely than in the Department of Medicine, and, after entrance, studies *two full years* instead of two *six months*!

We do not want to be misunderstood in regard to the animus of our editorial. We are not attacking the University of Michigan. Its regents have, to our thinking, failed to see the right and do it; but it is not given to every one to be a reformer, and we freely acknowledge that the institution under discussion is equal to, or even better than, the average American college, in that it has instituted at least the shadow of a preliminary examination.

Is it not time, however, for some one to speak in unmistakable tones, when the foremost educators of the nation self-complacently assert before the world, "Our aim has been to elevate the standard of medical attainments," although they require for their medical degree scarcely a sixth of what they do for their degree in engineering, and barely more than half of what they do from the mere druggist? Is it not pitiful to see, in various parts of our country, leaders in our profession so benumbed and blinded by the poison of habit or self-interest that they wonder why it is that power is slipping so from our grasp and that the profession is losing the respect of the people,—why it is that homœopathy and other forms of quackery so grow, and grow, and grow,—when they themselves are nursing the canker-worm that is eating out our vitality and supremacy?

THE past winter has been a very successful one with our medical schools. The Jefferson Medical College, at their recent commencement, conferred the degree of Doctor of Medicine upon one hundred and seventy men. The class of the University was of course much affected by the confusion incident to the hurried removal at the beginning of the session, as is shown by the fact that the graduating class was only one hundred. The Woman's Medical College conferred the degree upon sixteen women.

REVIEWS AND BOOK NOTICES.

ON FUNCTIONAL DERANGEMENTS OF THE LIVER. Being the Croonian Lectures delivered at the Royal College of Physicians, in March, 1874, by CHARLES MURCHISON, M.D., LL.D., F.R.S., Physician and Lecturer on the Principles and Practice of Medicine, St. Thomas's Hospital, etc. 12mo, pp. xvi., 182. New York, William Wood & Company, 1874.

Although recent physiological investigations have shown that the secretion of bile is far from being the only or most important function of the liver, we permit ourselves still to attach undue weight to it, and to forget the essential part the organ plays in the processes of sanguinification and of disintegration of albuminous matter, neither of which can be interfered with without giving rise to functional derangements quite as marked as those produced by conditions affecting the secretion of bile. Thus, urea and various other nitrogenous bodies are formed under normal circumstances in the liver to be afterwards excreted by the kidneys, but if from any cause this function is arrested, or if the amount of albuminous matter conveyed to the liver is so large that its powers are overtaxed, a less highly oxidized product than urea is the result, and hence the appearance of large quantities of uric acid in the urine. The circulation of this body in the blood gives rise to a variety of symptoms which Dr. Murchison groups together under the name of lithæmia, and which are traceable to the perturbing effects it exercises upon the various systems of organs.

When speaking of the treatment of these functional derangements, Dr. Murchison takes occasion to recommend the use of mercury. While fully endorsing the opinion that mercury does not stimulate the secretion of bile, he is nevertheless convinced that there are good grounds for believing that it exerts a beneficial action in these conditions. Part of this is attributable to the purgative properties it possesses, by which the discharge of bile from the bowels is increased, but in addition to this the author believes that it acts by promoting or in some way influencing the disintegration of albumen. Explain it as we may, there is unquestionably a condition recognized by most practical physicians, in which greater benefit will be derived from the use of occasional or repeated doses of mercurials than from that of any other remedy. There is still, it is true, some difference of opinion on this point, but, as the author remarks, the skepticism of the most doubting physician would be removed should he unfortunately find it necessary to test the truth of this statement in his own person. His testimony is the more valuable from the fact that he was taught to regard mercury as a remedy worse than useless, not only in hepatic disease, but also in syphilis. His convictions have, therefore, been forced upon him by experience, and are in no degree the result of preconceived opinions.

These lectures originally appeared in *The Lancet* and in the *British Medical Journal*; but, being the production of one who is an authority on the subject of which they treat, and being well and agreeably written, we think the publishers have done well in reproducing them in their present attractive form.

J. H. H.

SYPHILITIC LESIONS OF THE OSSEOUS SYSTEM IN INFANTS AND YOUNG CHILDREN. By R. W. TAYLOR, M.D., Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases, Physician to Charity Hospital, New York. 8vo, pp. 179. New York, William Wood & Company.

We have to thank the author for calling the attention of the profession to a subject which up to the present

time has received little or no consideration. Dr. Taylor is the first writer who has ventured to give a complete essay in this department of syphilis, and after a careful reading of the volume we have no hesitation in saying that the work has been well and conscientiously done, the result being one of the most studied and elaborate monographs that we know of. The subject is not an extensive one, but yet possesses many points of interest, all of which Dr. Taylor has succeeded in bringing forward in an attractive manner.

The subject-matter is divided into sections, with appropriate headings; the author's experience, together with that of others which he has collected, the symptoms of the disease, the pathological anatomy, diagnosis, treatment, and other questions, all receiving extended consideration. The work is founded chiefly upon a clinical study of twelve cases, which the author has been so fortunate to meet with in his practice, the details of which are related at length, and make a very valuable feature of the book. They are remarkably well reported, and show a laudable desire on the part of the writer to present their peculiarities in every aspect. A very full description of the lesions themselves, as they occur upon one bone or another, and their relations to diaphysis and epiphysis, is entered into, constituting an important part of the subject. The question as to whether osseous syphilitic lesions follow acquired as well as inherited syphilis is answered in the affirmative, and appears to be proven by two illustrative cases. The pathology is well worked out, and is accompanied by a handsomely executed drawing, showing the condition of the bone as it was found in one of the cases.

Perhaps the most useful section to the practitioner is that which treats of the relation of rickets to syphilis. The author supports the view that there is no connection between these two diseases.

The diagnosis of the osseous swellings of syphilis from those of rachitis, a matter of vast importance, is given exhaustively, and is one of the most valuable chapters upon this topic in all literature.

Regarding the book as a whole, it must be considered as a work of decided value, there being in fact no other thorough exposition of this subject extant. It contains much that is new, and is the production of one who has manifestly given much time and study to research, and whose experience enables him to speak with authority. The publisher has clothed the work very elegantly, the type and paper being exceptionally handsome.

L. A. D.

DENTAL PATHOLOGY AND SURGERY. By S. JAMES A. SALTER, M.B., F.R.S. New York, William Wood & Co.

This book, which was originally published by Longmans, Green & Co., of London, contains nearly four hundred pages, written in a pleasant and comprehensive style, doing credit to the author, who has had a good education in general medicine as well as an extended experience in the specialty of which he treats. Dr. Salter, having had these enlarged opportunities, fully appreciates the extent of some of the maladies directly dependent upon tooth-disease, and how largely the pathology of the teeth is associated with serious morbid changes in contiguous structures. Many of the chapters composing this work have been previously published essays, appearing from time to time in the transactions of societies and in hospital reports, and from this publicity have naturally been winnowed of the extraneous and unimportant matter that is frequently found in original papers.

On the general anatomy of the teeth, including their vascularity and sensibility, the author dissents entirely from the views so generally entertained of the nerves

permeating the dentinal tubuli. He says, "The mode in which the hard tissues of the teeth are supplied with nerves is still an enigma, but that there is some supply is certain on physiological grounds. It does not necessarily follow, however, that the nervous connection between the pulp and the dentine should be by direct radiation in the same course as the tooth-tube structure; it may be diffuse and circuitous, and thus an outlying mass of dentine may still maintain a sentient connection with the pulp, . . . the periosteum sharing in this function, as it does in the nutrition and general vitality of the teeth."

In speaking of the functions of the teeth, a diagram is presented, intended to illustrate, by section, the relation of the tongue to the teeth and palate in the production of the numerous sounds; this, with the description accompanying it, though a novel feature in a treatise on dental pathology and surgery, is of interest and not inappropriate.

In alluding to the oft-repeated assertions of the development of third sets of teeth, the author very wisely expresses doubt as to the correctness of these stories. Impacted and undeveloped teeth are of such frequent occurrence that, with the ignorance of the masses of the normal number of teeth, and their inability to assert positively the number of teeth which have been erupted, with the additional fact that no instance has been recorded within the last three-quarters of a century, it is prudent at least not to give undue credence to statements respecting the presence of third sets of teeth.

In treating of irregularities in the position of the teeth, their cause and remedy, while the subject is well presented, the author advances nothing new. The causes, as he enumerates them, are "congenital and hereditary; the prolonged retention of temporary teeth, accidental mechanical influences, disproportion of the size of the teeth and jaws, faulty development of the jaw-bones." For an original investigator to state that these superficial causes produce certain results will not satisfy his many readers. Should he not look beyond, and discern, if possible, some vital condition as a primary cause? These troublesome and unsightly results are of too frequent occurrence and too invariably accompanied by other characteristics to be passed over so lightly. It is a well-authenticated fact that large jaws with teeth standing alone and wide spaces between them belong usually to a low congenital mental development,—a marked reversion to an inferior order of creation; while a contracted jaw, teeth crowded and irregular in position, are accompanied by a good mental development, and not unfrequently a peculiar tendency or predisposition to what are termed nervous diseases.

The chapters on the congenital defects of tooth-structure and form, and on the cause of dental caries, show the result of much thought and experience, but the student cannot finish the perusal of the one on the cause of caries without a feeling of disappointment that one so competent should quote from Leber and Rottenstein's investigations respecting the leptothrix without either accepting or rejecting their theories,—theories which have been widely promulgated and accepted by some as a correct explanation of the cause of caries, but which doubtless involve debatable ground that will be warmly contested before they can rest undisturbed, the large majority of investigators to-day accepting the presence of the "leptothrix buccalis" in the cavity of decay as one of the results of a condition rather than a primary cause.

The result of Dr. Salter's researches upon the growths on the fangs of the teeth, which he terms odontomes, is probably the most thorough and satisfactory that has ever been published on this subject, and the pathologist and physician, who have often been baffled in their efforts to discern the cause of a case of intense and

protracted neuralgia, will find this chapter especially instructive.

For the ably-written chapter on "Secondary Dentine," with the subdivision of the subject into "Dentine of Repair," "Dentine Excrescence," and "Osteo-Dentine," every dental student will thank him. The development of the first of these (dentine of repair), being so thoroughly a remedial effort of nature, and occurring without occasioning nervous disturbance, is wisely designated from the others.

"The painful eruption of the wisdom-teeth," "alveolar abscess," "abscess of the antrum," and "nervous affections from tooth-disease," are all treated in a clear and concise manner. The practical information given in the ably-written and not too long article on nervous affections arising from abnormal conditions of the teeth, forcibly suggests that a more liberal education for the dental student must ere long be demanded, while to extend the studies of the student in general medicine so that he may have a better appreciation of the cause of a not unfrequent trouble with which he has to deal would certainly be a desideratum. Following these is a full and interesting account of the "phosphorus disease," in which many well-authenticated cases, with their treatment, are narrated.

The other chapters not here specified will all well repay a careful perusal. The book is well printed, the subjects nicely arranged, and finely illustrated with one hundred and thirty-three well-executed wood engravings.

To the student in the special department of dental surgery it is invaluable. To the student of general medicine it supplies an unfortunate deficiency in the curriculum of his studies.

C. N. PEIRCE.

ON THE TREATMENT OF PLEURISY; WITH AN APPENDIX OF CASES SHOWING THE VALUE OF COMBINATIONS OF CROTON OIL, ETHER, AND IODINE AS COUNTER-IRRITANTS IN OTHER DISEASES. By JOHN W. CORSON, M.D., Physician to the Orange Memorial Hospital, etc., etc. New York, Wm. Wood & Co., 1874. Pp. 31. Price, 50 cents.

This very thin volume, scarcely thicker than the silver coin for which it is offered as an equivalent, sets forth the results of observations upon more than five hundred cases of pleurisy, made during a service of several years as physician to the class of "Diseases of the Chest and Throat" in the New York and Eastern Dispensaries. The fatal cases only amounted to one-half of one per cent. The treatment consisted of anodyne diaphoretics, with mustard- and bran-poultices in the early stages, and in the later, of iodide of potassium with tonics, and a "croton-oil paint," composed of "olei croton tiglii, 3j; ether. sulphur. fort., 3ij; tinct. iodin., 3v," which (together with a stronger form) is highly and, we incline to believe, deservedly praised.

J. G. R.

ON WINTER COUGH, CATARRH, BRONCHITIS, EMPHYSEMA, ASTHMA. By HORACE DOBELL, M.D. Third Edition. Philadelphia, Lindsay & Blakiston, 1875.

This book, which was evidently printed in England, although nominally published in this country, is well known to all specialists, and should be known by all practitioners, although we confess to a little disposition to revise the old maxim so as to read *parvum in multo*. The manner of treatment certainly is exhaustive, but this very fulness gives it an advantage, so that we commend it heartily to those of our readers who are not already familiar with it. The present differs from the second edition chiefly by the addition of two new chapters, and a "complete index prepared by the best index-maker in London."

SELECTIONS.

SHAMPOOING.—Another example of the tendency that prevails to return to primitive measures in the treatment of disease, whether spontaneous or brought on by accident or injury, was lately noticed in Professor Broca's Ward at the "Hôpital des Cliniques." The case was that of a sprained ankle, in which M. Broca employed shampooing, or, as the French term it, "massage," with the best results. He does not believe in the efficacy of absolute rest in sprains, and attaches greater importance to shampooing than is generally accorded to it by surgeons.

"Primary shampooing," he stated, consisted of pressing or kneading the swollen tissues with the fingers; then of alternately flexing and extending the joints affected. By this pressure and forced motion, the extravasated liquids are dispersed into the subjacent cellular tissue. After the first shampooing, the pain and swelling return, but on the second day, when the operation is repeated, its effects last much longer, the pain is diminished, and after a few days, during which the operation is regularly practised, the pain and œdema disappear completely. "Secondary shampooing" is applicable to cases that had not been treated or imperfectly so in the first instance, and in which the pain, swelling, and inability to move have persisted. In such a case he would begin with gentle frictions, which are to be gradually increased, and to be applied to the most painful parts.

The counter-indication against this mode of treatment consists of acute inflammation of the parts; as in such a case the operation of shampooing would not only be intolerable, but would increase the inflammation. In all cases of sprain the utmost care and attention should be paid, with the view of forming a diagnosis, as it would be unpardonable in any surgeon shampooing a fractured limb, a practice not infrequent among quacks and bone-setters. In case of doubt, better treat the patient upon ordinary principles than to resort to the cruel and unscientific method of shampooing under such circumstances. M. Broca then described the process of the operation. After each sitting he applies a roller steeped in Goulard or some other resolvent lotion, and enjoins rest, absolute or otherwise, according to the nature of the case.—*Irish Hospital Gazette.*

GLEANINGS FROM OUR EXCHANGES.

"THE LEAST SACRIFICE OF PARTS" AS A LEADING PRINCIPLE OF SURGICAL PRACTICE (*The Lancet*, January 23 and 30).—Mr. Thomas Bryant lays down the following propositions:

(1) That in cases of disease or accident no more of the body is to be taken away than the necessities of the case demand.

(2) That to carry out this principle the surgeon may, in *pathological amputations*, fearlessly divide tissues infiltrated with organized inflammatory products, and even cut through the walls of suppurating cavities, or through diseased joints.

(3) That in *accidental surgery* parts irreparably injured are alone to be removed, and no healthy tissues are to be sacrificed in order to perform a recognized and probably a named operation. That to these ends the surgeon ought to utilize even doubtfully viable integument, or even leave a stump to granulate, when by so doing some portions of the shaft of a bone can be left, a joint saved, or amputation above a joint avoided.

He says that observation has taught him that amputations and excisions of joints are often performed for local disease in cases from which the local disease could otherwise be removed, with far less risk to life, with an equal probability of securing a good result, and with the preservation of a limb or joint.

Ten cases are given of neurosis and disease of the bones of the foot and the ankle-joint, illustrating the success which has attended the carrying out of the principle of removing only those parts which are actually diseased, taking away dead bone but leaving all other bone alone, and not sacrificing any bone or joint of the foot for no other reason than that a particular operation should be performed.

Fourteen other cases are detailed of disease and abscess of the knee, ankle, elbow, and shoulder joints, showing that free incision into joints, and the removal of necrosed bone therefrom, are excellent and successful operations.

Both of these measures are less severe than resection in the bulk of cases, and far less severe than amputation, and in a number of instances are also more successful.

A free cut into a suppurating or disorganized joint, whether associated or not with bone-disease, is rarely followed by any other than a good result. When the suppurating process is due to synovial disease, a recovery without further surgical interference may be looked for. When due to local necrosis, the incision helps nature towards the recovery of the cases by expediting the process of exfoliation, and the subsequent removal of the bone by either natural processes or some surgical proceeding. And in still more severe cases the incision gives relief, and in no way tends towards inducing any increase in the mischief.

JABORANDI (*The Lancet*, January 30, 1875).—Dr. Sydney Ringer has recently made thirty-seven careful observations on the action of this drug,—twenty on adults and seventeen on children. In many cases the latter were scarcely at all affected, the pulse was but slightly increased in frequency, there was very little sweating or salivation, and all the symptoms were strikingly slight when compared with the marked effects of jaborandi on adults. In the twenty observations made on eighteen adults, the perspiration in every case but two was most profuse, and in those exceptional instances it was free. It began in about ten minutes. In all the cases but one, the pulse was quickened from twelve to forty beats, the average being twenty beats per minute; the average increased frequency lasting two hours and a half. The temperature fell during the sweating from $.4^{\circ}$ to 1.4° , the average being $.9^{\circ}$. In no instance were the bowels relaxed; in two-thirds of the cases there was nausea, in one-half sleepiness. These observations prove a marked antagonism between jaborandi and belladonna. Belladonna checks the secretion from the skin, the salivary glands, the mucous membrane of the nose, bronchial tubes, stomach, and intestines, and dilates the pupil and contracts the arterioles: jaborandi, on the other hand, increases enormously the perspiration and saliva, and, in a much less degree, the secretion from the mucous membrane of the nose, the bronchial tubes, and the stomach and intestines. Robin asserts, moreover, that it lowers arterial tension, probably by paralyzing the vaso-motor nerves, and thus causing dilatation of the arterioles. Belladonna excites delirium, whilst jaborandi often produces sleep.

Atropia almost immediately checks the profuse perspiration and salivation caused by jaborandi. Belladonna arrests the secretion of milk, jaborandi decidedly increases it.

These drugs both flush the face and quicken the pulse, but belladonna does so by its paralyzing influence

on the pneumogastric, and, possibly, by stimulating the sympathetic nerves. Jaborandi probably quickens the pulse by dilating the arterioles (belladonna contracts them) and lessening arterial tension, thereby allowing the blood to pass more quickly from the arteries into the veins. Jaborandi locally applied to the eye causes (1) contraction of the pupil; (2) tension of the accommodative apparatus of the eye, with approximation of the nearest and farthest points of distinct vision; (3) amblyopic impairment of vision from diminished sensibility of the retina. These effects, however, do not last long.

THE COOLING PACK (*The Lancet*, January 9, 1875).—Dr. William B. Hunter reports the case of a child, æt. 3 years, in whom severe convulsions occurred during the course of an attack of varicella and threatened life. The following treatment was adopted, the axillary temperature being 104° and the pulse rapid. The patient was laid naked on a dry blanket, a towel slightly wrung out of ice-cold water having first been placed beneath him lengthwise. Another cold wet towel was placed over him, and the ends of the blanket were thrown loosely over all. The head was also kept thoroughly wet with cold water.

On feeling the feet and legs, they were found to be cooling rapidly, and already were almost cold; and as their relation to the head in the balance of the circulation, disturbed so much in the direction of the latter, was considered of the first importance, a cloth soaked in a decoction of mustard and hot water was wrapped round them as far as the knees. In about five minutes the towels were replaced by fresh ones from the ice-cold water, and a sponge from the same was gently squeezed over the head-bandage; and this proceeding was kept up, at similar intervals, for about half an hour, the towel to the front being changed twice for every single change of that to the back. At the end of that time the acute symptoms had considerably abated; rigidity had relaxed; quietness had succeeded restlessness; the pupils became more sensitive, and the eyes followed the light; speech, with some degree of intelligence, returned; and the flushed countenance became more natural in its hue. After changing the cloths as they grew warm, for about two hours, the little patient went to sleep in the pack, and the following morning was well enough to be up and dressed. Dr. Hunter particularly recommends this method of reducing the temperature, on account of the facility of its application and the ease with which unpleasant consequences may be averted. Should the least indication of an impending chill present itself through the cooling process being carried too far, the remedy is immediately at hand, in the shape of a few blankets thrown over the patient as he lies in the towels, and tucked closely around the trunk, extremities, neck, and feet, when the temperature would be found speedily to rise again, and the return of the febrile state at the same time effectually prevented by the profuse perspiration which now pours from the soothed and softened skin. The cooling envelope is now converted into a steaming poultice, and soothes by means of a moist warmth, where before it did so by means of continuous cold. By meeting either extreme with its opposite, the mean is ultimately obtained.

GLEETS.—*The Lancet* of February 13 contains a very interesting and practical clinical lecture upon this subject, by Mr. Berkeley Hill. After speaking of the symptoms of gleet, Mr. Hill goes on to say that, owing to the variety of affections causing it, and the fact that the treatment useful for one is very often of little avail for another, time is saved by ascertaining in the first instance the precise nature of the disease giving rise to the discharge. The most common cause is probably

chronic inflammation at one or more small patches in the urethra, left after acute gonorrhœa has subsided. Less frequently the cause may lie in a relaxed and often irritable condition of the mucous membrane at the prostatic part, and even tenderness of the prostate itself. The latter is known (through quacks) to the public as spermatorrhœa. In order to ascertain the seat of the inflammatory patches, Mr. Hill uses an olivary bougie, graduated upon the stem: the increased tenderness at the points of disease marks their locality. When there is more inflammatory congestion than induration, indicated by acute pain with slight resistance to the bougie, and a white, tolerably thick discharge, Mr. Hill uses an injection of two or three minims of a solution of nitrate of silver (ten to twenty grains to the ounce of water), applied to the diseased patch or patches. This causes increase of the discharge for a few days, and, after keeping the patient quiet for that length of time, weak astringent injections are used for four days, and then the strong application again made. If at the end of a week or so there should be any induration, sounds from No. 10 to 12 and 13 are used, and recovery should be complete within three or four weeks. In more obstinate cases soluble and medicated bougies are used, and the urethrotome recommended in case of stricture. *Prostatic gleet* may be brought about either by extension of gonorrhœal inflammation along the urethra, or by congestion and irritation of a sympathetic kind of the prostatic body. Mr. Hill speaks very earnestly in favor of a regimen rather than medication alone in these last cases, but at the same time advises various internal and local measures as appropriate,—injections, the passage of sounds, etc.

THE INFANTILE UTERUS.—Under this title Dr. W. C. Grigg (*Obstet. Jour. of Great Britain and Ireland*, February, 1875) treats of a peculiar condition of the uterus, not infrequently the cause of sterility. He speaks of three forms, two congenital, of which one is and one is not curable, and a third superinduced as a sequence of parturition at an early age, the latter sometimes known as super-involution of the uterus. Each of these forms is briefly described by Dr. G., as well as the various modes of treatment likely to prove available. The article closes by advising a careful diagnosis, as the prognosis differs greatly in the different varieties.

THE TREATMENT OF PUERPERAL FEVER.—*The Lancet* of January 20 states editorially that in the treatment of puerperal fever we must aim chiefly at preserving or restoring the purity of the blood, by fresh air, by copious disinfecting washings of the vagina or even of the uterus,—as with weak solution of Condyl's fluid; at maintaining strength by nourishing and yet convenient food and stimulants; at relieving local pain by occasional opiates, and by warm poultices, which are invaluable. In nearly all cases it will be found that there is some local inflammation of a low asthenic order, like that of erysipelas, to be met, not by old-fashioned antiphlogistics, but, like erysipelas itself, with tincture of iron associated with quinine. The former may be given in a mixture with spirit of chloroform, while the latter is given in a pill, in doses of two grains every four or six hours. The opium may be very conveniently given in the same pill with the quinine, say in quarter- or half-grain doses, or even more. It seems not only to relieve pain, but to act curatively on local inflammation. Purgatives often give rise to much irritation and disturbance, and in grave cases of blood-poisoning we are only too apt to get diarrhœa. In general, it is better to invite the bowels, if sluggish, to act by an enema than to irritate them by a purgative. In no cases is the thermometer more valuable as a guide to the condition of the patient, or to the action of remedies, than in the various cases of puerperal fever.

INTRA-PERITONEAL HÆMATOCELE CURED BY FREE INCISION AND DRAINAGE (*Boston Medical and Surgical Journal*, March 4).—Dr. John Hemans was consulted by a woman 38 years of age for a tumor six or seven inches in diameter, in the left hypogastric region, roundish, not tender, movable, quite elastic, but not distinctly fluctuating, and descending into the pelvis. Uterus normal; could be moved to the right, but not to the left. Seven weeks previously, while at stool, she had been suddenly attacked by a severe pain in the left hypochondriac and iliac regions, followed by chills. The next day she noticed a tumor the size of an egg, and very tender, in this region. Vomiting and chills at intervals up to date of consultation. After etherization, the needle of an aspirator was introduced through the abdominal wall, and about seven ounces of dark reddish fluid withdrawn. The tumor was decided to be of the same nature as that of a retro-uterine hæmatocele. Suppuration in the sac followed. Three days later, the tumor had increased in size, and was very hard. There was pain, and increase of temperature and pulse. Etherized again, and tapped with a common trocar through the vagina; about two pints of dark-brown, bloody, offensive fluid escaped. In a few days the tumor had again enlarged. The same operation was once more performed, the opening enlarged with a knife, a large elastic tube introduced, and drainage established. The sac was washed out daily with warm water. The tube was removed in four days; the discharge gradually became healthy, induration disappeared, and at the date of report only a little inoffensive serous fluid was secreted. No subsequent trouble was experienced.

THE COLD-WATER COIL IN INFLAMMATION OF THE EXTERNAL MALE GENITAL APPARATUS, AND AS AN ANTIPHLOGISTIC AFTER OPERATIONS ON THE PENIS.—Dr. F. N. Otis communicates to the *Medical Record* an account of an apparatus which he names the cold-water coil. It is composed essentially of a piece of rubber tubing one-sixteenth of an inch calibre, and six or seven yards in length. At the middle portion this tubing is coiled upon itself, so that by half a dozen turns or more it presents sufficient capacity to encircle loosely the entire penis or scrotum. By placing one end of this tube in a vessel containing ice-water, elevated above the patient's level, and creating a current through it, the application of cold may be continuously and conveniently made. The coils may be retained in place by a piece of cloth folded back and forth over the coils, and to which they may be stitched. Dr. Otis has found this simple apparatus of essential service in the acute form of gonorrhœa, reducing inflammation and preventing erections. It has also proved useful after the operation of circumcision and that for stricture.

COPAIBA AS A DIURETIC.—*The Practitioner* for February contains a communication from Dr. E. L. Dixon, giving his experience in the use of copaiba in cases of ascites from cirrhosis, heart-disease complicated by œdema pulmonum, and heart-disease with albuminuria, ascites, and anasarca.

In each of these cases the administration of the drug was followed by large increase in the amount of urine secreted, and rapid amelioration of all symptoms. The copaiba was administered in the form of capsules. In one case ten to twenty minims were thus given every night, in the other two cases fifteen to thirty minims were administered night and morning.

BROMHYDRIC ACID (*The Peninsular Journal of Medicine*, February, 1875).—Dr. D. C. Wade, after having prescribed bromhydic acid more than sixty times and in a great variety of cases, believes that it is a powerful alterative, a grateful refrigerant and sedative, and that

it affects the stomach similarly to the other mineral acids, increasing the appetite, aiding digestion, and acting as a general tonic.

MISCELLANY.

At the late meeting of the Medical Society of London, the lecturer, Dr. C. F. Alexander, on account of the presence of Mrs. Garrett Anderson, was forced to address his audience as "Mr. President, Madam, and Gentlemen."

NOTES AND QUERIES.

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA, March 13, 1875.

The following prizes were awarded at the Commencement of the Jefferson Medical College, held 11th of March, 1875.

1. A prize of \$100, by H. C. Lea, Esq., for the best Thesis, to Reinard S. Keelor, of Pennsylvania, with honorable mention of the Theses of Harry R. O'Connor, of Pennsylvania, D. Leonard Pratt, of Pennsylvania, J. L. Gaskins, of Florida, and T. Benton Hill, of Pennsylvania.
2. The Toner Medal, by J. M. Toner, M.D., of Washington, D.C., for the best Thesis based on original investigation, to Charles M. Thompson, of England.
3. A prize of \$50, by the Professor of Surgery, for the best Report of his Surgical Clinic, to Dixon C. Allen, of New Brunswick.
4. A prize of \$50, by the Professor of Obstetrics, for the best paper on the Descriptive and Relative Anatomy of the Gravid Uterus, to Thompson E. Potter, of Missouri, with honorable mention of the papers of Joseph F. Robinson, of Missouri, and A. F. Balmer, of Pennsylvania.
5. A prize of \$50, by the Professor of Practice, for the best Report of Clinical Cases, to Daniel M. Appel, of Pennsylvania, with honorable mention of an Essay by Eugene A. Ward, of Missouri.
6. A prize of \$50, by the Professor of Anatomy, for the best Anatomical Preparation* contributed to the Museum, to Daniel M. Appel, of Pennsylvania.
7. A prize of a Pocket Operating Case, of the value of \$25, by the Demonstrator of Anatomy, for the best Dissection in the Anatomical Room, to J. W. Pope, of Pennsylvania.

J. B. BIDDLE, M.D.,
Dean of the Faculty.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 16, 1875, TO MARCH 22, 1875, INCLUSIVE.

- HEAD, J. F., SURGEON.—Relieved from duty in Department of Dakota, to proceed to Boston, Mass., and, on arrival, to report by letter to the Surgeon-General. S. O. 44, A. G. O., March 16, 1875.
- HAMMOND, J. F., SURGEON.—When relieved by Surgeon Moore, to proceed to New York City, and, on arrival, to report by letter to the Surgeon-General. S. O. 44, c. s., A. G. O.
- MOORE, JNO., SURGEON.—Relieved from duty in New York City, and ordered to report in person to the Commanding General, Department of Texas, for duty as Medical Director. S. O. 44, c. s., A. G. O.
- BILL, J. H., SURGEON.—In addition to his duties as member of the Army Medical Board, to perform, temporarily, the duties of Attending Surgeon at Headquarters Military Division of the Atlantic. S. O. 44, c. s., A. G. O.
- AZPELL, T. F., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Columbus, N. Y. H. S. O. 42, c. s., A. G. O.
- ROSE, GEORGE S., ASSISTANT-SURGEON.—To report to the Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 42, c. s., A. G. O.
- STYER, CHARLES, ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 34, Department of the South, March 16, 1875.
- SEMIG, B. G., ASSISTANT-SURGEON.—Relieved from duty in Department of California, and ordered to Department of Arizona. S. O. 44, c. s., A. G. O.
- BEALL, GEORGE T., MEDICAL STOREKEEPER.—Granted leave of absence for fourteen days. S. O. 42, c. s., A. G. O.

SATURDAY, APRIL 3, 1875.

ORIGINAL COMMUNICATIONS.

NECROSIS OF THE TEMPORAL BONE.

BY CHARLES SHAFFNER, M.D.,

Assistant-Surgeon to Eye and Ear Institute, Penna.

THE following case is one of the most interesting that has ever fallen under my care, not only on account of its severity, but also from its stubborn progress and final ending in death. I regret that I must furnish an incomplete history, as the post-mortem examination (which the friends would not permit Dr. Keen to make) would have disclosed the exact amount of destruction of the temporal bone, and the condition of the brain and its membranes.

Sarah D., æt. 47, Irish, widow, monthly nurse, without marked symptoms of struma, presented herself for treatment on October 1, 1874, and gave the following history:

She has been a widow for twelve years, and has a daughter fifteen years of age, suffering with chronic otorrhœa. As long as she can remember she has had a discharge from the left ear, of light color, and most probably muco-purulent in character. She has always had good general health, except the discharge from left ear, accompanied with a diminished amount of hearing on that side. The right ear is now, and has always been, healthy. In June, 1874, while attending a labor case, she slept on the floor near an open window, from which exposure an acute otitis media resulted. She had severe burning pains in the region of left ear, which made her cry out with suffering. The otorrhœa was immediately checked by this acute inflammation. The pain deprived her of sleep. She had severe headache, with jumping and throbbing pains in the left ear, attended with tinnitus compared to the roaring of the sea. There was entire loss of hearing on that side. The general symptoms were fever, vomiting, and anorexia.

In a short time a swelling formed about one-fourth of an inch below and posteriorly to the lobe of the left auricle, which was leeches, giving relief for a time. This swelling soon pointed, when it was lanced, discharging a small amount of bloody pus. A fistule was developed, which still remains.

Her attending surgeon performed paracentesis of the membrana tympani, but this did not give her relief. On August 6 the abscess discharged through the membrana tympani, which caused a diminution of suffering. A pain in her ear varying in severity, with a profuse discharge from the external auditory meatus and the fistule, have continued from that time until I saw her on October 1.

On admission, her condition was as follows: She has burning pain in left temporal region. The left side of the face is swollen, with profuse lachrymation of left eye, and some loss of vision. A stiffness of left temporo-maxillary articulation. A very offensive breath, a furred tongue, no sore throat, but thinks the discharge from the ear enters the throat by the Eustachian tube; a very poor appetite, and inability to eat anything solid from the pain which mastication causes in the ear. She is rather pale and thin, and feels weak. Complaints of pain upon tapping with the finger over the mastoid region, but there is no redness here. A very offensive, profuse, and clear discharge from external auditory meatus, and from fistule under the lobule. The dis-

charge contains a number of small irregular yellowish flakes, something like very small rice-grains macerated a long time in water. There is almost entire loss of membrana tympani. Does not hear a moderately loud-ticking watch, even on strong contact, in left ear, but hears a moderately elevated voice quite distinctly. A small probe passes up the fistule for about two inches upwards and inwards without any difficulty, when dead bone is reached, apparently in the neighborhood of the tympanum. When the ear is washed out with the syringe, the water is driven out through the fistule in a thin stream to a distance of three or four feet, showing a communication with the external auditory canal.

The treatment consisted of iron and quinine, occasional anodyne to ear, and good food in a liquid form. She was ordered to wash the ear out frequently with lukewarm water with a syringe at home, and to keep it as clean as possible. The local treatment was syringing, inflating by Politzer's method, with the application of poultices mixed with poppy-heads or tincture of opium. These measures gave partial relief, and were continued.

On October 3 a small piece of necrosed bone was discharged through the fistule, about three-fourths of an inch long, and very narrow, coming, most probably, from the walls of the tympanum.

On October 20 we discovered a piece of bone working out of the external auditory canal, about one and a fourth inches inside the meatus. It was easily seized with the forceps, but quite a strong force could not remove it. We succeeded on October 28 in getting this away in two small fragments. She always felt much better after the pieces of bone came away.

She continued to visit the Institute, but was gradually losing strength. On November 5 she sent word that she had taken her bed and was very sick. I visited her the next day, and found her suffering with fainting-spells. She had frequent severe rigors, or a general tremor of the whole body, and had to be held by attendants. These were not chills, as she had no feeling of being cold. She did not suffer any pain; had hiccough, nausea, and bilious vomiting. Her stomach retained nothing. There was considerable hebetude, and disinclination to talk or to be disturbed. These symptoms indicated that the inflammation was most probably extending to the brain. At this time three fragments of bone were removed from the meatus. She was placed on quinine, stimulants, good food, and subnitrate of bismuth, which relieved the vomiting. The poultices were continued. She gradually improved, and in four days was about the room again. The probe, very carefully used, showed dead bone in all directions inside the auditory canal and tympanum, and I thought the whole petrous portion of the temporal bone was involved, with some extension to mastoid cells. The discharge was very profuse, and in spite of our supporting treatment she was gradually running down. She soon became very weak and unable to eat. The pain in the ear was very acute at times, and I ordered her to dust in the ear one-eighth of a grain of morph. sulph. occasionally.

Finding her attendants could not continue to care for her, I sent her on November 28 to St. Mary's Hospital, where she fell under the care of Dr. Keen. I visited her two days before her death, which occurred about December 12, and found œdema of the lids had set in. She was in a high fever when I saw her, and said she had chills and fever every day,—most probably hectic. She was perfectly conscious; recognized me, and answered all questions correctly. She at no time while under my observation had convulsions, coma, or paralysis, except slightly, as I thought, of left side of the face, due to facial nerve. Dr. Keen informs me

he made every possible effort to obtain a post-mortem examination, and regrets his failure. This would have demonstrated the exact amount of destruction of the temporal bone, and the damage done to the brain, especially as to the existence of abscess of the brain, which we all suspected to exist, but which the symptoms only faintly indicated.

Remarks.—A case of necrosis of the temporal bone is always one of interest and anxiety to the aural surgeon, especially if the patient is an adult and the disease situated in the petrous portion of the bone, as ours was chiefly. Every surgeon notices in his practice a number of cases of cicatrices and depressions over the mastoid cells, indicating severe disease in early life, frequently as a sequela to scarlatina and the other exanthemata; yet the patient has survived it. Caries of the mastoid, especially in young children, is very often recovered from. "Young children will throw off quite large portions of the bone, and yet come off with their lives, while older persons will usually succumb to one of the many consequences" (Roosa). It is also noticed that the prognosis is influenced by the portion of the bone involved, and necrosis of the middle ear is the most dangerous chiefly on account of such complications as meningitis, cerebral abscess, pyæmia, phlebitis with pleurisy and pneumonia (Tanner), paralysis, and fatal hemorrhage. Gruber, Agnew, and others report the extraction of the whole internal ear, the patient living for years afterwards. Very large masses of bone have been removed at times, and the patient has made a lucky recovery; while, again, the operator has unexpectedly found he has exposed the brain, and with grave results, by removing so large a mass.

The case teaches us that no case of otorrhœa is free from risk, and how careful our patients should be not to expose themselves to cold, especially while sleeping, as our case did. It is also very important not to permit a retention of the discharge, for this has frequently caused necrosis, especially in the mastoid cells, with extension to the brain ending in cerebral abscess. A direct communication usually takes place between the diseased bone and the brain-substance through the meninges.

The symptoms of brain-complication sometimes come on suddenly, with a chill, or convulsion, or again with increased pain followed by paralysis, coma, and death.

Our patient gave us only slight symptoms of brain-trouble, so that we could only suspect cerebral abscess; yet Dr. Roosa says, "In very rare cases there are absolutely no symptoms except those of chronic otorrhœa, until death occurs from cerebral abscess."

The treatment of our case was chiefly supporting, combined with the use of anodynes. The discharge should be removed as frequently and thoroughly as possible with the syringe, and the middle ear cleared of pus by Politzer's method. All sequestra should be removed with great care, as both the internal jugular and internal carotid have been opened, causing fatal hemorrhage. Leeches externally, with incisions down to the periosteum, occasionally do good, and even such heroic treatment as the trephine

and actual cautery (Gruber) have been used with benefit.

2042 VINE STREET, PHILADELPHIA.

A CASE OF SUPPOSED FRACTURE OF THE ODONTOID PROCESS, WITH RECOVERY.

BY WHARTON SINKLER, M.D.,

Philadelphia.

THE discussion at the Philadelphia County Medical Society (*Philadelphia Medical Times*, March 13) on Dr. O'Hara's "Case of Injury about the Cervical Vertebra," induces me to detail a case which came under my observation at the Pennsylvania Hospital, while acting as clinical clerk to Dr. J. Forsyth Meigs, through whose kindness I am permitted to report it.

Dr. O'Hara remarked that at first he had considered his patient to have sustained a fracture of the odontoid process, but that the diagnosis had afterwards been abandoned.

"Prof. H. H. Smith, after an examination of the case, thought the odontoid process could not have been broken. No authenticated specimen of such fracture had ever been found; and the few cases reported were from extreme violence."

I have met with several cases in point, where there seems to have been but little doubt that there had been a fracture of this process; in fact, the autopsies clearly revealed separation of the dentiform process from the axis. For instance, there is Dr. Willard Parker's case, quoted by Hamilton:*

The patient, a milkman, was thrown from a carriage upon his head and face. On getting up he complained only of faintness, but the next day he had pain in the back of the head, swelling of the neck, and inability to rotate the head. There was no paralysis. In a few days he had sufficiently recovered to resume his business, but a prominence of the neck just below the occiput and a little to the left of the spine remained.

Five months after the accident he began to complain of numbness in his limbs, and to drag his feet when he walked. Two days later, he died instantly, while sitting in a chair.

At the post-mortem examination the odontoid was found fractured through the base and inclined backwards towards the cord.

Sir Astley Cooper† reports the case of a woman in the Female Wards of St. Thomas's Hospital, who, while sitting up in bed eating her dinner, suddenly fell forward dead. At the autopsy it was discovered that the dentiform process was broken off, and that the head in falling forward had forced the root of the process back against the spinal cord, and thus caused instantaneous death.

Dr. Stephen Smith, of New York, in an elaborate paper on the subject,‡ has collected twenty-three instances of fracture of the odontoid process. One is a case reported by Dr. Bayard (*Canada Medical Journal*, December, 1869):

The patient, a child six years of age, fell five feet, striking on her head and neck. She was unable to move her head without great pain, but there was no swelling or irregularity of the neck. Two months after-

* Fractures and Dislocations.

† Dislocations and Fractures of the Joints, p. 463.

‡ American Journal of the Medical Sciences, October, 1871, p. 378.

wards she had convulsive movements of the arms and legs, followed by paralysis of the whole body below the neck. After remaining in this condition for three months, the patient gradually recovered the power of walking. About two and a half years after the accident a post-pharyngeal abscess formed, from which a bone escaped, and this was decided to be the odontoid process.

I will quote one more case from Dr. Smith, which came under his own observation :

A laborer was admitted to Bellevue Hospital three months after having fallen from a building upon his head. At first he thought his neck was slightly sprained, and continued his work for six weeks. His first symptom of serious trouble was a swelling at the upper part of the neck, which was very painful.

Soon after this, he noticed that the arms were growing weak. During the next three weeks the deformity of the neck increased rapidly, and the head became fixed, with the chin carried to the left side and upwards. The paralysis of motion in the left arm became complete, and the power of the right arm was much impaired; the patient also lost all power in the left leg. Sensation diminished in all the limbs. He had constant headache, and there were frequent severe attacks of dyspnoea. The left arm became œdematous, purple, and cold; there was involuntary action of the bladder and rectum.

The patient died one hundred and sixty days after the injury.

At the *autopsy*, the odontoid process was found to be fractured, and carried forward so as to lie in a nearly horizontal position with the anterior ring of the atlas.

This case is remarkable from the fact that for six weeks after the injury there were no grave symptoms. The fracture of the odontoid must have occurred at the time of the fall, but no displacement can have taken place until some time later, when the swelling upon the neck appeared.

In the following case I do not pretend to say positively that there was fracture of the odontoid process, but the symptoms very closely resembled that injury :

Bernard C., æt. 22 years; single; admitted to the Pennsylvania Hospital May 15, 1872. Soon after coming on duty with Dr. Meigs, on August 1, I was struck by the resemblance between the symptoms of the patient and those in the cases of fracture of the odontoid process reported by Dr. Stephen Smith, to which I have just referred. I obtained the following history :

His general health has never been robust, but he has had no definite ailment except a pain in the left side, which he has had off and on since a child. Has never had syphilis or evidences of scrofula.

On April 1, 1872, while in the act of jumping on a train of cars which were in motion, having left the station about one hundred yards, he lost his footing, and was thrown violently from the car to the ground. He thinks he was struck between the shoulders by the end of the car, but he does not know on what part of his body he fell. He lay unconscious for about two hours, when he recovered himself, and called for help, and was taken home. When moved, he suffered intense pain in the back. There was no external injury to the spine or elsewhere, except a small scalp-wound. Head was flexed strongly, with chin resting on sternum, and was immovable. Both arms were completely paralyzed. There was complete loss of power in the right leg to the knee, but below the knee the paralysis was only partial. No facial palsy; the patient states that he was able to

eat, speak, and whistle with ease. There was slight paralysis of rectum, but none of bladder.

He suffered no pain in spine or head while at rest, but whenever moved the pain was intense. There was acute burning pain in the arms and hands, most severe on the posterior aspect of fore-arms and hands. Sensation was wanting in both arms, and a pin could be stuck deep into the flesh without giving him pain. Sensation in both legs unimpaired.

The only treatment he had was cut and dry cups over the spine.

In a week from the injury, power began to return in the right leg, and he was soon able to move it freely. During the next three weeks no other improvement took place; he remained in bed, appetite was good, and he felt comfortable except when moved. About four weeks after the accident he began to move the fingers of the left hand, and in two weeks more he had all of the movements of the left arm. The right arm remained palsied.

On admission to the hospital, there was a large prominence in the cervical region of spine, not painful on pressure, but somewhat so when the head was moved. Was unable to stand, but had full use of left arm, and could move both legs. Treatment ordered was ext. belladonna, gr. $\frac{1}{12}$, ergot, gr. v, t. d., and Huxham's tincture, a teaspoonful three times daily. This was continued until July 18, when tinct. belladonna, gr. v, ext. ergot, fld., f3j, t. d., was substituted for the pills.

On August 10, he is able to walk about the ward without the least limp, and uses the left arm for everything. The right arm is powerless. There is a swelling upon the neck just below the occiput. The head is flexed, the chin resting upon the breast, and he can raise it but a short distance. There is no pain in the neck, but he complains of its feeling tired if he remains in the erect position long.

August 29.—Improvement continues; can extend head so that chin is four finger-breadths from sternum, and can rotate head about two inches to either side. Has power of flexion and extension of right fingers and wrist, and can pronate and supinate fore-arm, but all these movements are feeble. Paralysis of arm and shoulder still complete. Walks with ease for a short time, but it soon becomes painful to support the head.

Ordered apparatus to support the head, and faradization of right arm. Under this treatment the patient gained rapidly; the apparatus gave him great comfort, and the right arm improved in power.

On January 10, 1873, just before he was discharged from the hospital, he came to my office. He could use the right arm for everything, and could even write quite neatly. The movements of the head were much more free. There was no difficulty in swallowing, and no swelling could be observed in the posterior wall of the pharynx.

I have endeavored to hear of the patient within the last year, but have failed to find out anything of him.

Of course it may be said that in this case there might have been fracture of any of the upper cervical vertebræ; but I think a characteristic feature of fracture of the odontoid process was the position of the head, and the manner in which the patient would steady the head by holding the chin with the left hand.

Dr. Stephen Smith* says, "If the function of the odontoid process is to poise the head upon the spinal column, we should naturally anticipate that the most important and constant symptoms would be those which show that this support is lost."

Since writing the above, I have had the opportu-

* Loc. cit.

nity, through the courtesy of Prof. D. H. Agnew, of examining a beautiful specimen of fracture through the base of the odontoid process in his possession. The patient lived ten days after the accident which caused the injury, and the lesion was diagnosed before death.

348 SOUTH SIXTEENTH STREET, March 18, 1875.

A CASE OF DIRECT TRANSFUSION.

BY FRANCIS L. HAYNES, M.D.

Reported by JOHN R. HAYNES, M.D.

THE subject of the operation, Mattie E., is 27 years old, and married. Her mother is still living, and is healthy; her father suffered from consumption, but died from cancer; one of her sisters suffers from a very chronic form of phthisis. The patient has always been "delicate," and subject to severe attacks of bronchitis. During two of these attacks (which occurred respectively four and two years since) she expectorated small quantities of blood. She has had several attacks of profuse uterine hemorrhage, and states that she has at times vomited blood, and discharged blood per anum.

In April, 1874, after exposure to cold, she contracted bronchitis, which was followed at varying intervals by profuse hæmoptysis. The quantity of blood lost varied at different times from an ounce to a pint. Repeated careful physical examination revealed the existence of no disease except bronchitis.

The attacks of hæmoptysis were not at all ameliorated by the exhibition internally of ergot, digitalis, or any of the numerous astringents; or by inhalations of solutions of the persalts of iron. Finally, hypodermic injections of ergotine (Bullock & Crenshaw) were employed. These invariably checked the hemorrhage within a few minutes, but did not prevent its return. It was found necessary to increase the dose gradually until gr. xv were given at each injection. On several occasions this was repeated the same day. These injections caused great pain and much local inflammation, which, however, in no instance proceeded to suppuration. To allay the pain, morphia was given hypodermically and (as the patient was peculiarly insusceptible to its action) in large doses (gr. j) immediately after each injection of ergotine. When, as occasionally happened, the attack of hæmoptysis was permitted to pursue its own course, the discharge continued with greater or less copiousness during a period of from ten to thirty-six hours.

The digestion was habitually imperfect; attacks of vomiting occurred nearly every day; the appetite was capricious. The menstrual flow occurred at irregular intervals, as had always been the case. The pulse maintained its usual rate and frequency for quite a length of time, but gradually became weaker and more frequent. A more or less troublesome cough, with muco-purulent expectoration, existed.

September 10, 1874, 10 A.M.—Mrs. E. has had a profuse attack of hemorrhage daily for the last ten days. Pulse 144, weak and flickering; respiration

rapid and gasping; temperature (in axilla) 100°. Face pale, lips blanched, and extremities cold. In short, the *tout ensemble* of symptoms was such as to render the prognosis extremely unfavorable. A physician of great intelligence and experience visited the patient, and emphatically expressed his opinion that "that woman was going to die," and it was almost impossible not to agree with him. As a final resort, it was decided to perform transfusion. A young lady in robust health generously offered to supply the blood.

Operation.—The Aveling syringe was carefully prepared by filling it with an aqueous solution of sodium bicarb. (gr. iii- $\frac{1}{2}$) at 100°. The patient, lying in bed, was well propped up with pillows. The donor sat on a chair by the bedside. The right median basilic vein of the patient and the left of the donor were exposed and nicked, and the canulæ introduced, the one in the donor's vein pointing towards the fingers, that in the patient's vein pointing towards the trunk. Eight ounces of blood were slowly transfused. About two ounces escaped from the donor's vein by the side of the canula, which could not be pushed sufficiently far down the vein because of a change in its direction.

While the injection was going on, the patient became quiet and her lips reddened. Dr. Houghton, who had charge of her pulse, noticed no marked change. When the above-mentioned quantity of blood had been transferred, it was noticed that the donor had grown very pale, and that her pulse was very weak. The apparatus was immediately withdrawn, and compresses placed over the openings in the veins. The donor, who by this time had fainted, was laid on the floor. In a few minutes she regained consciousness, and in a week was as well as ever.

Ten minutes after the operation the patient's pulse was 128, stronger and fuller; temperature 100°; extremities warm.

September 11.—Pulse 122, strong; general condition good.

September 12.—Pulse 120. Slight hæmoptysis, which was readily checked by ergotine.

Notwithstanding four or five slight attacks of hæmoptysis brought on by injudicious exertion, the patient made a good recovery, and in two weeks was able to leave her bed.

March 3, 1875.—Mrs. E. has since the last date enjoyed moderately good health. Notwithstanding the greatest self-neglect and frequent exposure, she has suffered but four attacks of hemorrhage, and very rarely requires medical aid. Physical examination shows no pulmonary disease.

THE PERIOD OF MAXIMUM DEATH-RATE.

BY J. BERENS, M.D.

OF the many paths open to the searching investigation of modern science, there is one which has to a great extent escaped the attention bestowed in other directions, and that, too, when data are so easily obtained, and the results to be derived therefrom so patent as scarcely to elude the most superficial scrutiny. The influence which the time of

day has in determining the favorable or unfavorable issue of disease has only very recently been brought before the medical world in the form of statistics from some foreign hospitals.

Deep-rooted popular prejudices are not often without foundation, and it behooves the physician to yield them all respect, however much at variance they may seem with science.

From time immemorial, whenever the lamp of life has been seen to burn feebly, the friends, and oftentimes the physician, have watched with anxiety and solicitude the period of the day peculiar tradition has marked as critical, and indicated as a point upon the hither side of which lurks the King of Terrors, upon the farther side of which gleams at least a ray of hope.

The "turn of the day" is so often heard in the sick-room, and influences to so great an extent the fears and hopes of anxious friends, that its origin and foundation should no longer be allowed to rest in obscurity.

The following tables, which throw some light upon this subject, are made up from the records of over one thousand deaths which have taken place in the Philadelphia Hospital during the past fifteen months. They are made to show the proportion of deaths which occurred during each period of one, two, three, four, six, and twelve hours in the twenty-four:

Hour.	I.	II.	III.	IV.	V.	VI.	Total.
	In each hour.	In each 2 hours.	In each 3 hours.	In each 4 hours.	In each 6 hours.	In each 12 hours.	
Midnight.							
1 A.M.	40						
2 "	48	88					
3 "	39		127				
4 "	39	76		164			
5 "	59						
6 "	50	109	146		273		
7 "	82						
8 "	65	146		255			
9 "	52		198				
10 "	59	111					
11 "	38						
Noon.	46	84	143	195	341	614	
1 P.M.	45						
2 "	37	82					
3 "	39		121				
4 "	53	92		174			
5 "	32						
6 "	48	80	133		254		
7 "	47						
8 "	35	82		162			
9 "	34		116				
10 "	36	70					
11 "	28						
12 "	25	53	89	123	205	459	1073

From these tables it will be perceived that a marked difference appears between the number of deaths occurring at different periods of the day. Thus, a maximum death-rate of 82 is observed between 6 and 7 A.M., and a minimum of 25 between 11 and 12 P.M. Again, from midnight until 10 o'clock A.M. the general tendency is to increase, while from 10 A.M. throughout the remainder of the cycle there is a decrease. This becomes more marked proportionately as the numbers are grouped into sections comprising larger periods. The sudden rise in the rate, and the subsequent decline

after this rise has attained its maximum, are well shown in columns III. and IV. To make a general summary, the death-rate suddenly rises at midnight, and continues to increase until about 9 A.M., when there follows a more or less regular decline, until the minimum is attained, a little before midnight.

As to the underlying causes of these phenomena, they are still shrouded in obscurity. Among them, however, two things must occupy a prominent position,—nursing and the solar influence.

The fact of the existence of a correlation between vital and physical forces may be considered as established. In treating of this subject, it must be fully recognized that we are dealing with living animals which have nothing new, as regards the elementary forms of matter of which they are composed.

The vital energy required in the evolution of thought is correlated to heat and other natural forces as closely and as truly as the energy expended in striking an anvil with a hammer. There is no essential difference between them, either as to their quality or mutual convertibility. Organic and inorganic are, in their dependence one on the other, so intimately related that any great motive power for the one must, in its relations to the other, occupy a position of vast importance.

This wonderful unity and close interdependence among the physical forces, mechanical motion, heat, light, and electricity, and the correlation undoubtedly existing between them and the purely vital forces, lead irresistibly to the conclusion that there must occur a complete reversion of their mutual play and activities between the time of meridian of one day and that of the next; for beyond question the sun is the most prominent source of all energy, whether vital or physical.

To return to the tables; it will be observed that the hour in the twenty-four which is marked by the highest death-rate corresponds almost exactly with the time when, taking the average of the year, the sun has been longest below the horizon of this latitude. After the average time when the sun has risen sufficiently above the horizon for its influence to be felt, there begins a tendency in the death-rate to decline until midnight. But this decline continues after the average time of sunset, and even grows more marked towards midnight. This latter point seems to militate against any theory of a solar influence. But the fact should be duly considered that the effects of the sun do not disappear with it, that the patient is generally placed under more favorable circumstances and composing influences which the night brings with it, such as nourishment, arrangement of bedding, and, above all, a cessation of the turmoil, the jars and excitements which inevitably, to a greater or less degree, involve even the best-regulated sick-rooms.

Another matter of quite as much moment as the sun and all the attendant train of forces it evokes and sustains, is the undeniable fact that, however assiduous the attendants on the patient may have been through the night, the vigilance of the watchers relaxes as the day dawns, just at the time when it should be most on the alert. In the many cases when the question between life and death is an even

one, this neglect is fatal, and the waning light expires, when a few drops of stimulus, or the mere rousing of the patient from what is often more lethargy than slumber to administer food or medicine at the appointed hour, would have decided the issue in favor of life. The results arrived at in this paper, meagre as they are, possess no mean significance. The field, though not a broad one, is important, and a few hours spent over hospital registers would amply repay those who have opportunity for such research.

If there is a period in the day when a larger demand is made on the energies of a patient, the time should be known, that at that moment science may step in to stimulate flagging nature, and bear part of the burden under which, with failing strength, she already begins to stagger.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF H. C. WOOD, JR., M.D.

Reported by WM. MASTIN, M.D., Resident.

EPILEPTIC CONVULSIONS WITH CHOREIC TWITCHINGS—NITRITE OF AMYL BY THE MOUTH.

B. D., æt. 20 years; white; seamstress. At the age of twelve she suffered from severe chorea, which, after running a tedious course of many months, left her with occasional spasmodic twitchings of the different muscles of the body, especially of the left side. Three years later she began to have epileptiform attacks, which were preceded by nausea, swimming of the head, with a sense of suffocation, and accompanied by semi-unconsciousness.

By degrees these increased in severity, until they became well-marked attacks of epileptic convulsions, with unconsciousness, frothing at the mouth, biting the tongue, lividity of the face, etc. As the spasms grew worse they diminished in frequency, and the muscular jerkings became constant and more localized. The twitchings are at present almost exclusively confined to the muscles of the left side of the neck, especially the left trapezius, and those of outer side of left thigh and calf. The trapezius by its rapid contractions throws the head backwards in quick succession, but with no regularity, whilst the muscles of the calf act rhythmically.

She is extremely nervous and hysterical; the least excitement increasing the twitchings, and causing jerkings of other muscles not ordinarily affected.

In the intervals of the attacks of the epileptic convulsions her general health is perfect; but her memory is failing. The ophthalmoscope reveals nothing abnormal. On admission, she was put in a quiet ward, and placed on large doses of potassium bromide, then of arsenic, then of nitrate of silver, etc., but without benefit. Finally, one drop of nitrite of amyl three times a day was ordered to be given by the mouth, and cautiously increased.

The first dose was given on a small lump of sugar in the morning, about one hour after breakfast. Almost simultaneously with its being swallowed the heart commenced to act violently; the respiration was hurried and labored; she gasped for breath; the face was flushed almost to lividity, and she complained of a fullness and tightness of the head, so that it seemed to her it would burst and her eyes start from their sockets. These symptoms followed each other so quickly that

there was hardly a perceptible interval between them. The pulse was very rapid,—150 in the minute,—but not lessened in force, each beat being full and distinctly felt by the fingers.

The thermometer in the axilla registered 99° Fahr.; but this increase in the temperature was doubtless due to the arterial excitement. The paroxysm lasted about one minute and a half, the disagreeable symptoms passing off rapidly. As they did so, the pulse and temperature fell to their normal position.

No feeling of exhaustion or weakness followed this stage of excitement; but the muscular twitchings, both of the neck and leg, were very much lessened. This quieting of the muscular spasms continued from an hour and a half to two hours, after which the former condition was gradually redeveloped.

The second dose, which was given just before dinner, caused the same symptoms as the first, but the third had no effect whatever; not even the slightest quickening of the pulse was produced.

The one drop was recommenced in the morning, but by degrees, as the system became accustomed to its presence, it lost all influence. Then two drops were given three times daily, each dose producing intense cardiac action and flushed face, and relieving the chorea for the time.

After a few days the larger dose began to lose its power over the jerkings, although the excited action of the heart and other phenomena were still caused by each dose.

A third and fourth time the amount was raised, until two drops were given seven times a day, making fourteen drops in the twelve hours. This quieted her completely, and while it was continued she was almost entirely free from the choreic twitchings; but the benefit was only temporary, for, so soon as one or two doses were omitted, the movements returned with equal severity.

Although the salt was given in such large doses, and continued so long, at no time were there any unpleasant symptoms beyond those already detailed. There was no diminished sensibility in any part of the body, no numbness or tingling complained of.

The amyl salt controlled the local chorea, but in the quantity mentioned did not exempt her from the epileptic attacks; although if given when a spell was about to come on it effectually prevented it.

On two such occasions two drops were exhibited, and she became at once quiet, went to sleep, rested, and next morning awoke, feeling quite well.

When under the full influence of the drug, her menses came on at the expected period. They were perfectly natural in every particular, the flow being well established, but not increased in the least, and lasted the usual time.

The pulse-rate and temperature were taken a number of times during the use of the medicine. Just after a dose the pulse ranged from 140 to 160 per minute, the temperature never exceeding 99½° Fahr.; in the interval between the doses, when not under its immediate influence, both the pulse and temperature were normal.

The urine, which was not increased in quantity, was repeatedly examined by the oxide of copper test for sugar, but never once yielded the faintest trace.

In this condition the patient left the house, thus preventing any further observations in the case.

METACHLORAL.—M. Dujardin-Beaumetz reports that he finds in metachloral a useful substitute for iodoform in the treatment of ulcers, etc. A serious objection to the use of the latter agent is found in its very persistent and insupportable odor. From this objection the metachloral is entirely free.

TRANSLATIONS.

OPERATION FOR DOUBLE HARE-LIP.—Prof. Duplovy contributes to the *Bull. Gén. de Thérapeutique* for February 28 an account of a case of double hare-lip complicated by prominence of the intermaxillary bone and division of hard and soft palate, which he relieved by resection of the septum, freshening, and suture of the bones. The patient, a little girl, presented the following appearances. The intermaxillary bone was appended to the extremity of the septum, was quite mobile, and extended in front and obliquely upwards, overlapping in front the line of the maxillary bones by about two centimetres (nearly two-thirds of an inch). It was about thirty-five millimetres broad, and bore on its free edge four small, irregularly arranged incisors belonging to the first dentition. (Dental evolution in the lower incisors had terminated six months previously.) The form of the fleshy tubercle was that of a leaflet of a trefoil attached by its smaller extremity to the nose. Two smaller portions adherent to the maxillary bones were adherent also to the alæ nasi. The two borders of the labial divisions widely separated and turned back exteriorly were quite thin at their free border, and became smaller towards the alæ nasi. Being in part adherent to the maxillary bones, they could be pulled towards the median line only with difficulty.

On opening the mouth, the separation of the maxillary bones was found much less considerable than the size of the intermaxillary. The two maxillæ were approximated, particularly in front, to such an extent as to thrust back the intermaxillary, leaving an interval between them of only twenty-five millimetres, a circumstance important from an operative point of view. The voice was nasal, the articulation poor, deglutition even of liquids was more easily performed than would be supposed.

The operation was as follows: The fleshy tubercle of the intermaxillary was separated with care, the tracts which were bound to the alæ nasi being cut at the same time, while the intermaxillary was supported so that the septum should not be injured; the two external incisors, which were only loosely attached, were removed. The intermaxillary was then pierced with a drill, and a double silver wire introduced, the division of which gave two sutures.

A V-shaped fragment of twelve millimetres was then removed from the base of the septum by means of curved scissors. Considerable hemorrhage occurred at this point in the operation, which, however, was successfully checked.

The intermaxillary could now be pushed back until it rested like a keystone between the other bones. The edges of the intermaxillary, as well as those of the adjoining bones, were then freshened, and the parts joined together by wires introduced through holes drilled for the purpose, the apposition of the parts being very close. The restoration of the soft parts was then accomplished by freshening the edges of the central fleshy tubercle, bringing small flaps over from the lateral portions and retaining them by means of seven twisted sutures, four lateral and three inferior; the latter, intended to unite the small flaps to the inferior border of the central tubercle and to blend their extremities, were used in connection with fine pins.

Finally, in order to prevent deformity of the nasal openings, and particularly to avoid the traction which they might exert upon the soft parts below, a long pin was run through the alæ and the naso-labial column, and the sides drawn together by a thread.

The result was satisfactory. Union took place along most of the bony parts, and the union of the tissues of the lip was perfect. The two deciduous central incisors

were replaced by permanent teeth, which were too badly directed for purposes of mastication, but which aided in articulation, improving the voice considerably. The former hideous aspect of the face was removed, and the girl's appearance much improved. X.

THE STATE OF THE PUPIL DURING ANÆSTHESIA.—MM. Budin and Coyne contribute to the *Archives de Physiologie*, No. 1, 1875, a communication on this subject, accompanied by illustrative cases. From their observations and researches they draw the following conclusions:

1. The administration of chloroform causes a series of modifications in the pupil which bear a relation to the state of sensibility.

2. During the period of excitation the pupil is dilated.

3. This period passed, the pupil becomes progressively contracted, remaining sensible to excitations.

4. During the period of profound surgical anæsthesia two phenomena on the part of the pupil are constantly observed: 1, an absolute immobility of this organ; 2, a state of contraction. There is a relation between the absolute insensibility of the subject and the contraction with immobility of the pupil; between the return of sensibility and the dilatation with mobility of this organ.

5. The state of the pupil may, then, from the point of view of sensibility, serve as a guide in the administration of chloroform.

6. Gradual dilatation of the pupil supervening during an operation indicates that anæsthesia is less profound, and that sensibility is returning.

7. During operations of long duration, if it is desired that the patient should be completely insensible the anæsthesia should be so managed that the pupils should remain constantly contracted and immobile.

8. Efforts at vomiting may bring about dilatation of the pupil, cause insensibility to disappear, and bring about awakening; it annihilates in part the effects of the anæsthetic.

9. It is important not to confound true chloroform-anæsthesia with asphyxic anæsthesia; the latter causes different phenomena on the part of the pupil.

10. The condition of the iris, although it may serve as a guide for the direction of anæsthesia, does not indicate the imminence of accidents. The pulse, the respiration, and the general condition of the patient must be carefully watched by the administrator of chloroform. X.

EXPERIMENTAL RESEARCHES UPON THE MODE OF ACTION OF THE MORE COMMON EMETICS.—Dr. H. Chouppé's researches (*Archives de Physiol.*, No. 1, 1875) lead him to the following conclusions:

The mode of action of the more common emetics is not the same for all, and if the phenomena which accompany or precede vomiting are closely inquired into the greatest differences will be observed.

Ipecac and its alkaloid emetine, no matter by what way they may be introduced into the organism, always provoke vomiting by direct irritation of the terminal filaments of the pneumogastrics in the mucous membrane of the stomach. Tartar emetic and antimony have a double action: they may act upon the gastric mucous membrane, but also directly upon the medulla. There are, however, differences between these two medicaments: tartar emetic acts more quickly upon the stomach than upon the medulla; apomorphine more rapidly on the nervous centres than upon the gastric mucous membrane. The best proof of this which can be given is, that the dose of tartar emetic sufficient to cause vomiting when injected by the veins must be larger than when it is introduced by the stomach. With apomorphine, on the contrary, the maximum effect is produced by injection into the general circulation. X.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

ALCOHOL IN PYÆMIA.

IT is a well-assured fact that the best treatment for snake-poisoning is enormous doses of alcohol,—as much brandy or whisky being given as the patient can drink, until some symptoms of intoxication are induced, or the patient is dead or convalescent. Putrid matters introduced into the blood in quantity produce symptoms and pathological changes strikingly similar to those of snake-poisoning, as any one can convince himself by experiments on the lower animals. It is, therefore, not unreasonable to try whether narcotic doses of alcohol might not be of use in pyæmia. Moreover, experiments in the laboratory have shown that it is impossible to induce pyæmic fever in animals narcotized with alcohol, and also that it is more difficult than usual to kill such animals with putrid injections.

We do not know whether commencing pyæmia has ever been treated in the way that is orthodox for rattlesnake-poisoning, but certainly, as pyæmia is at present almost synonymous with death, the following enthusiastic and somewhat egotistical experience of Mrs. Jane Grey Swisshelm in the *Chicago Tribune* is worthy of consideration:

"When I went into the hospital service, in 1863, I was at once confronted with the gangrene, and called publicly for 'Lemons! lemons! lemons!' Soon pyæmia followed, and then I called for 'Whisky! whisky!' Everything I asked for came in abundance; pyæmia treated externally with alcohol and water, friction and heat; internally with milk-punch, eggs, rich broths, cherry

wine, although I have had fifty struck by the premonitory chills in one night.

"Surgeons never interfered with my treatment except when I went to them for advice, and I became so confident of success that I used to say, 'If Death wants to get a man from me, he must send some other messenger than pyæmia, for I do not recognize that creation of unskilled surgeons and incompetent nurses.' Alcohol was the basis of my remedies, and 'we praised the bridge that carried us over.'"

The precepts of Mrs. Swisshelm are strongly supported by a series of papers which commenced to appear some months since in the *Deutsche Klinik* (1874, No. 45, 1875, Nos. 2 and 6). In these Dr. Theodore Clemens, of Frankfort, states that he has seen in private practice, during the last fourteen years, eight cases of pyæmia of a high grade, all of which recovered under the free administration of alcohol. He prefers red wine, of which he gives a bottle a day whenever he fears the development of pyæmia, and, so soon as chills appear, increases this quantity to as much as the patient can be got to drink. In regard to the external use of alcohol, of which Mrs. Swisshelm speaks, our readers will remember the remarkable paper by J. L. Suesserott which appeared in this journal last year. As the result of some little experience and a good deal of reading, we have come to the conclusion that our country friend was about right, and that of all the various antiseptic dressings yet brought forward, whisky is probably the cheapest and most efficient, as it is the safest. Would it be asking too much of our surgeons if they would try alcohol without and within in almost unlimited quantities in pyæmia?

THE AMERICAN MEDICAL ASSOCIATION.—We have received from the Permanent Secretary a circular concerning the meeting of the Association on the 4th of next May, at Louisville, Ky., and closing as follows:

"Secretaries of State medical societies that have adopted the Code of Ethics are respectfully requested to forward to the undersigned a complete list of the officers, with their post-office addresses, of those county and district medical societies entitled to representation in their respective bodies. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates.

"It will also enable the Permanent Secretary to present a correct report of the medical organizations in fellowship with the Association.

"WM. B. ATKINSON, M.D.,

"Permanent Secretary."

We have also received a communication from Dr. Busey calling attention to the rule requiring that all

papers intended to be read before the sections shall be forwarded to the officers of such sections at least one month *before* the meeting of the Association.

The sections and their committees are as follows:

Practice of Medicine, Materia Medica, and Physiology: Dr. Austin Flint, Sr., New York, N.Y., Chairman; Dr. J. K. Bartlett, Milwaukee, Wis., Secretary.

Obstetrics and Diseases of Women and Children: Dr. W. H. Byford, Chicago, Ill., Chairman; Dr. S. C. Busey, Washington, D.C., Secretary.

Surgery and Anatomy: Dr. E. M. Moore, Rochester, N.Y., Chairman; Dr. T. S. Latimer, Baltimore, Md., Secretary.

State Medicine and Public Hygiene: Dr. H. I. Bowditch, Boston, Mass., Chairman; Dr. H. B. Baker, Lansing, Mich., Secretary.

CONCOURS.—Some years since, Dr. Henry Hartsorne won the professorship at the Philadelphia High School by concours, but the method has not taken root in our soil, the climate apparently not being suited to free contests for position. It is with great pleasure that we note the re-inauguration of the plan by the faculty of the Jefferson Medical College, and we trust that its new life may be a longer one. At the recent spirited concours for the lectureship on physical diagnosis in the summer faculty of the school mentioned, there were four candidates, but Dr. Stanley Smith won the position,—a good deal, we believe, to the surprise of the medical circle especially interested in the event. As none of the competitors had achieved reputation by original research, the method of choice was unexceptionable, and we sincerely congratulate both Dr. Smith and the faculty. We do not, however, believe in the concours entirely: we are doubtful of a system which might place a man in a professorship because he was, as a lecturer, a little better than his opponent, although in other respects much inferior to him. A modified concours, in which the final judgment should be based on the published work of the candidate, his practical skill in the branch, his originality, and his trial-lecture, offers, probably, the best possible mode of selection, unless, as in Germany, there could be a gradual promotion by selection from a professorship in a lower to one in a higher school.

TRICHINÆ, according to a Nordhausen paper, have recently been found, on microscopic examination, for the first time, in the flesh of a wild boar. Hitherto it has been believed that these parasites infested the domestic pig alone.

CORRESPONDENCE.

UNIVERSITY OF STRASBURG, March 1, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In writing my first communication to your journal I shall select a subject which seems to me of the greatest importance,—namely, the possibility of *nourishment with peptones*.

Since Eberle succeeded in making an artificial digestive fluid from the mucous membrane of the stomach, many varied and careful researches have been published upon gastric digestion. The essential result of these researches goes to show that solid albuminous matter passes out of the stomach in a fluid condition and also altered in its properties. The altered albumen, called by Lehmann "peptone," is soluble in watery fluids, whatever their reaction, and does not become precipitated or otherwise altered by boiling, while other solutions of ordinary albumen, as, for instance, white of egg, coagulate upon boiling, and albumen dissolved in acid or alkaline fluids precipitates when these are neutralized. Funke first observed as a peculiarity of peptone that in a state of solution it possessed the property of diffusion through animal membranes or artificial parchment. This property is possessed in general, according to Graham's well-known researches, by those fluids only which are crystalloid in a solid condition. Peptone, however, is an exception to this rule, as in a solid form it is always amorphous. This diffusibility of peptone is therefore the more important a property, since albuminous matters either do not diffuse at all, or do so only to a slight degree, while we are obliged to believe that they reach the blood normally by diffusion. The absorption of albuminous matters into the blood is believed to occur by their first becoming changed into peptone; this is then absorbed, and after absorption becomes again changed into ordinary albumen. The process of peptone formation appears an important one in gastric digestion, and still more so in its relations to intestinal digestion, when it is considered that the pancreatic juice acts upon albuminous matter in the same way as the gastric juice.

A more accurate study of pancreatic digestion has been rendered possible since the discovery of a method of making artificial pancreatic juice, similar to that by which artificial gastric juice has been made out of the mucous membrane of the stomach. It has been found that in digestion by pancreatic juice a peptone is formed similar in all respects to that produced by the action of gastric juice. The pancreatic secretion, however, is active, whether in acid, neutral, or alkaline solutions, being more powerful under the latter condition; while the gastric juice produces its greatest effect, that is to say, the most rapid solution of albumen, in the presence of acid in the proportion of four parts to the thousand. Since, however, the acid digestive mixture of the stomach becomes altered as to its reaction upon entering the duodenum, the albuminous matters undigested by the gastric juice cease to be acted upon, but must

now be digested by the pancreatic secretion. Between the gastric and the pancreatic digestion, however, there is an essential difference. Gastric digestion is entirely completed by the formation of peptone. But, while the peptone formed by the action of the pancreatic juice upon albuminous materials differs in no respect from the former, certain crystallizable matters are formed from this peptone by longer digestion, as Kuhn has shown, matters which are essentially leucine and tyrosine.

By the further progress of the pancreatic digestion, bodies are formed which are decidedly no longer albuminous, and which, if introduced into the system, will not become such, but will either be excreted or will undergo further decomposition.

The question here arises as to whether peptones become ordinary albumen or are broken up into similar constituents, as in the case of prolonged action of the pancreatic juice.

It is the object of the present article to refer to two works which agree in appearing to solve these problems, though, indeed, I propose subsequently to bring forward other researches upon the purely practical side of the question.

There are certain diseases in which, for very intelligible reasons,—*e.g.*, on account of perfect occlusion of the œsophagus,—nourishment can be administered only by the lower intestine. When such nourishment is supplied by means of albuminous bodies, these play an important part, and it becomes a question of moment how we can best bring about the absorption of this material.

The first and simplest question is, Can the intestine absorb to the least extent unchanged albumen if only this is in a soluble form, as, for instance, white of egg, or is this impossible?

While many experiments upon animals appear to indicate that such absorption does take place, yet all these results are rendered negative, or opposed, at least, by the fact that it is impossible to obtain a portion of normal intestinal mucous membrane in a living body which does not secrete digestive juice. Under these circumstances the albuminous material may easily be changed into peptone before absorption. Even though this is the case, it is necessary, in order to be successful in the attempt to give nourishment by this means, that in practice we should, instead of mere albumen, use a so-called digestive mixture. That is, we must use a mixture of some albuminous body, as, for instance, flesh, with artificial pancreatic juice, in order that the formation of peptone may be more rapid, and, consequently, that absorption may take place more quickly. It is still more simple if the albuminous body is absorbed as a peptone, or if the peptone becomes converted into albumen after absorption it is still more simple to make use of peptone directly, and thus to save the sick body the labor of making the change. From this point of view, the question whether the sick or convalescent should be nourished *per anum* or *per os*, and the purely physiological question whether peptone after absorption becomes

converted into albumen, must approach each other closely.

Although these questions had not been decided experimentally one way or the other, yet Leube some years ago succeeded in nourishing sick persons with peptones in practice. The necessary peptones for this purpose were obtained artificially only with great difficulty, and it was only possible to get the remarkable peculiarities of the albuminous bodies by heating them in a Papin's digester, with water, to a temperature of 212° , in order to dissolve them and convert them into peptone. By acting upon flesh in this manner, Leube procured a preparation which he found of the greatest use in a number of cases.

While these purely practical results in the case of human beings were not contradictory to, but, in fact, in support of, the possibility of the metamorphosis of peptone, it was important to get an exact explanation of the question by extending these researches to animals. Such researches were undertaken almost simultaneously by Plotz, in Buda-Pesth, and Maly, in Innsbruck. The researches of these investigators were, fortunately, supplementary to each other, Plotz having experimented upon the dog, and Maly upon the pigeon. In a dog ten weeks old, and weighing 1302 grammes, Plotz ascertained (*Pflüger's Archiv*, Bd. ix. s. 323) the amount of milk ingested daily, and also the proportion of albumen, fat, and salts contained in the same. After the amount of nourishment necessary to support the animal had been ascertained, an artificial fluid nourishment was prepared, containing similar proportions of peptone, butter freed from albumen, grape sugar, and salts. The animal was fed with this fluid, which was injected into the stomach by the aid of a catheter five or six times a day. The peptone was represented by fibrin digested with gastric juice. While on milk diet, the animal took 520 cm. daily, gaining in three days 33 grammes in weight. One hundred centimetres of the milk contained 9.06 grms. solid matters, including 3.35 grms. albuminous, 2.21 grms. fatty, and 0.47 gm. saline. One hundred centimetres of the artificial food contained 5.0 grms. peptone, 5.0 grms. grape sugar, 3.0 grms. fat, and 1.2 to 1.5 grms. salts. The respective proportions are thus seen to differ considerably in the latter case from those ascertained in the case of the milk, and this difference is most marked as regards the salts. The high proportion of this constituent is connected with the condition of the peptone, and, according to Plotz, could only be diminished with great trouble.

Later, the nourishing fluid was made more concentrated, so that 100 centimetres contained 8 grms. peptone, 8 grms. sugar, and 6 grms. fat. During the eighteen days of the experiment, the dog received 567 grms. peptone, 422 grms. sugar, and 309 grms. fat.

During two days it was attempted to nourish the dog on peptone alone; but the occurrence of vomiting and diarrhœa made it necessary to return to the use of the complete fluid. These disturbances excepted, the dog nourished well during the whole course of the experi-

ments. All the functions appeared to be normally performed, peptone appearing neither in the stools nor in the urine. The weight of the animal rose during the course of the research from 1335 grms. to 1836 grms., an increase of 501 grms.

This increase can, however, only be explained by the supposition that the peptone entirely supplants the albumen as regards all the functions of nutrition.

Before Maly (*Pflüger's Archiv*, Bd. ix, s. 585) attempted any researches upon the nourishment of animals, he wished to make a comparison between the chemical composition of peptone and that of the albuminous matters from which it was formed. To this end he bestowed particular care upon the cleansing of the fibrin the digestion of which was to produce peptone. The peptone also was for the most part freed from its essential contamination of salts, which in Plotz's researches had made itself noticeable in a disturbing manner. The salts belonged to the peptones as a result of the method of their preparation from the nourishing fluid, and were separated by Maly by the aid of diffusion. It appeared that in a mixture of salts and peptones the first diffuse so much more rapidly that a separation of the two may be effected without an appreciable loss of peptone. The elementary analysis of the cleansed fibrin, and of the peptone therefrom derived, resulted in showing so little difference as to the elementary composition of these substances that peptone is not to be looked upon as proceeding from a further chemical decomposition of albumen.

Maly made use of pigeons in his experiments, on account of their cleanly habits and the ease with which they can be fed with measured quantities of nourishment. A pigeon was fed with wheat of a known chemical composition to such an extent as just to maintain the "vital equilibrium;" that is to say, it was managed that the amount of nitrogen taken into the body should precisely equal that which was excreted. The pigeon was then fed with pellets containing known quantities of a mixture of similar composition to that of the usual food, excepting that peptone was substituted for the albuminous matter.

Many carefully conducted experiments upon pigeons in which feeding with wheat was alternated with the administration of peptone pills showed that under the use of the latter the body-weight not only held its own, but increased. This could only occur from the fact that peptone was more readily absorbed by the intestines than albumen. At all events, peptone is an albuminous nourishment for pigeons, or, in other words, is a reconstructible and organizable product of digestion.

The practical conclusions which can be immediately drawn from these experiments are the following:

It seems possible that in case of sickness a certain amount of work in the alteration of albumen may be spared the body by its partial nourishment, at least, per anum. In what manner this may best be accomplished in any given case these physiological researches do not indicate.

DR. E. TIEGEL.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 28, 1875.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

Chylous fluid from a hydrocele.

DR. JAMES TYSON presented a specimen of milk-white chylous fluid, sent to him for examination by Dr. C. H. Mastin, of Mobile, Alabama. Six and a half fluidounces of the fluid were removed by Dr. Mastin, by tapping, from a hydrocele, which he describes "as distinct, and on the front part of the testis, just below where the cord emerges from the gland."

On examination, Dr. Tyson found the fluid alkaline, specific gravity 1015, and highly albuminous, becoming almost solid on application of the tests. Microscopic examination revealed a molecular base, some leucocytes, and a smaller number of oil-drops. The suspended portion was almost completely soluble in ether, and there remained a cream-like fluid on evaporation of the latter.

In the Transactions of the Pathological Society of London, vol. xvi, p. 184, is reported a case referred to by Holmes in his System of Surgery. This fluid was milky from the presence of fatty matter.

Bardeleben gives the analysis of a similar fluid from a hydrocele, reported by Vidal. The fluid resembled a fat emulsion or milk, was without odor, saline in taste, and alkaline in reaction; specific gravity 1010, not coagulable by heat or acetic acid alone, but by the action of both coagulation ensued. After adding chloride of sodium, a clear fluid was obtained by filtration which was also coagulable by heat, by numerous acids, sulphate of copper, and alcohol. Treated with ether, so much fat was dissolved that it was possible to form butter. The presence of sugar was revealed by Trommer's and the yeast test; sodium-chloride and lime were found, but no phosphoric or sulphuric acid.

Vidal called this case *galactocoele*; but Dr. Tyson thought the term *chylous* was at least more suitable for the specimen he presented, since it exhibited all the elements of chyle, including the leucocytes or chyle-corpuscles, of which, however, no mention is made by Vidal.

The PRESIDENT said that it was an interesting fact that nearly all instances of chylous fluid in serous cavities occurred in the *tunica vaginalis testis*. He was not aware of any peculiar relation between the tunica and the lymphatics which would account for the presence of chyle in this situation and not in other serous sacs. The microscopical and chemical examinations show that it is not the result of any grave inflammatory action. There is something still unexplained in relation to the matter, quite worthy of investigation.

Extensive subcranial extravasation, which complicated a fissured fracture of the skull.

DR. RICHARD A. CLEEMANN presented the specimen, and read the following history:

"Through the courtesy of Dr. Tyson, the pathologist to the Hospital of the University of Pennsylvania, I am enabled to show the Society this specimen of traumatic subcranial blood-clot, from a patient who came under my care before his removal to the hospital.

"The subject of the accident was a sailor, 20 years of age. While coming up the river Delaware in a schooner, at 7 A.M., November 30, 1874, he was struck by a block (a heavy piece of wood bound with iron) attached to the jib-sheets. He was unaware of being unconscious

from the blow, though a fellow-sailor afterwards recalled seeing him on his knees; but he could have been stunned but for a very short period, since the captain of the vessel, his father, who was on the after-part of the deck at the time, did not know till an hour afterwards that any accident had occurred. About 10 A.M. the injured man lay down, complaining of pain in the head and vomiting; and in the afternoon I saw him on the vessel, then attached to the wharf. These symptoms still continued, with a feeling of lightness in the head, but he was perfectly conscious and without paralysis. There was tenderness over the right side of the head anteriorly, and a little fulness was observed, but no depression of bone could be anywhere discovered. Ten grains of calomel were ordered, which were to be followed by a dose of sulphate of magnesium. Perfect quiet was directed, and an unstimulating diet.

"I saw the patient the next day about noon. He was now lying on his left side, curled up on the seat of the cabin, and seemed to be made uncomfortable by any attentions paid to him. His father said he could only occasionally cause him to speak, but he would open his eyes, which he kept closed, when told to do so, and, at my request, turned his head from one side to the other. He had been found in the morning at the side of the vessel, where he had gone to evacuate his bladder, a portion of the urine having wetted the deck. I understood at the time that his bowels had not yet been moved, though afterwards I was told that he had had an involuntary evacuation. I now considered him to be in the condition of 'cerebral irritation,' as described by Mr. Erichsen, and, recognizing the likelihood of subsequent cerebral inflammation, and the disadvantages of his residence on the vessel in that event, it was decided that he be removed to the Hospital of the University of Pennsylvania, about a quarter of a mile distant. While I was at the hospital, whither I went at once to make arrangements for his admission, I was hastily summoned back to the vessel on account of an alarming change in my patient's condition. I found him lying on his back on the floor of the cabin, comatose, and suffering one convulsion after another. These spasms were tetanic in character. Suddenly the lower limbs would be rigidly extended with the feet pointed, while the hands and arms would be stiffened and flexed, and in the severer attacks the muscles of the spine would be affected to the degree of producing marked opisthotonos. The respiratory muscles were also involved, at times to the extent of producing mucous rattling in the trachea, frothing at the mouth, and accumulation of secretion in the nose, these symptoms being followed by an approach to stertor in the breathing, which feature, however, was very transient. Borborygmi were heard in the intestines, but accompanied by no involuntary discharge. The pulse, in the intervals of the convulsions, counted sixty beats in the minute, and was oppressed in character. Under these circumstances I opened a vein in the right arm, and observed with interest that the prick of the lancet was followed by the motion of withdrawal of the limb. The blood spurted freely till ten ounces had been lost, when the vessel collapsed. This measure was undertaken, not in the hope of cutting short the convulsions, but as a temporary resource, with the view of diminishing vascular tension, that the cerebral congestion consequent on the muscular disturbances might do less injury. The pulse was more free afterwards, though the number of beats to the minute was not altered. The hospital ambulance, though momentarily expected, did not, through a misapprehension of the driver, arrive for the patient, who thus remained two hours longer on the vessel. During the five hours the convulsions continued; then the man, who had been lying in folded blankets merely, and in a corner of the overheated

cabin, was placed on a soft bed, exposed to a current of fresh air, when the spasms ceased; which sequence allows the inference that they were reflex in character, excited by his uncomfortable position. Finally, he was carried on a stretcher to the hospital. The journey, though short, was a severe one, for the day was very cold, and the way lay across three vessels floating at different heights, and over undulating and broken ground. Whether from these causes or not, the man was repeatedly convulsed during the transit, so that when he was placed in a bed in the ward his condition seemed far worse than before. His skin was now very hot; face somewhat livid, breathing labored, though not stertorous, and pulse 120. I detected no paralysis of the limbs, but the pupils were widely dilated.

"The case now passed from my care, but I learned that the man died ten hours after admission, his condition becoming worse and worse.

"The *necropsy* was made by the house-surgeon, the head only being examined. A fissured fracture of the skull first presented itself. This fracture, as I saw it delineated on a prepared skull, extended from near the summit of the frontal bone, on the right side, running not far from and apparently parallel to the coronal suture, which it crossed low down, into the right greater wing of the sphenoid, where it divided into two arms, one of which penetrated the lesser wing of the same side. Higher up a branch had been given off, extending forward through the frontal, and another downwards and backwards into the squamous portion of the temporal bone. Examining the cranial contents, a large blood-clot, five inches in diameter and more than an inch thick, is seen, covering, with the exception of a small portion posteriorly, the whole of the dura mater, which corresponds to the right anterior lobe of the cerebrum. The arachnoid cavity is free from blood; the vessels of the pia mater intact, the cerebrum, except the depression caused by the clot and the post-mortem staining, normal. Removing the clot, the larger vessels beneath are found uninjured, as was to have been expected from the late occurrence of the symptoms of compression.

"This case is in accord with the conclusions of Mr. Callender, that rapid death from coma without paralysis is the usual consequence of effusions about the vertex, but it differs from the general rule in the super-vention of convulsions.* It is interesting to note, however, that in Mr. Callender's cases of extravasation into the brain-substance, the spasms were observed, as a rule, when the lesion, which was accompanied with left-side paralysis, was in the *right anterior lobe* of the cerebrum exterior to the optic thalamus and corpus striatum.†

"It is exceptional that so severe an injury as the one recorded should have been received without appreciable loss of consciousness. That this symptom, when secondarily developed, did not make its appearance till thirty hours after the accident, is to be explained, most probably, by an issue of blood so slow that the brain was for a time able to accommodate itself to the disturbing effects of the extravasation.

"As to the question of the use of the trephine in the treatment, this appears to have been one of the rare instances where its use would have been entirely justifiable. The accurate knowledge of the part struck indicated the probable site of injury, while the slow approach of coma and the absence of paralysis seemed to designate an extravasation without the brain-substance proper.

"The post-mortem examination revealed no contraindications. The consideration of the measure, how-

* St. Bartholomew's Hospital Reports, vol. iii., 1867.

† *Ib.*, vol. v., 1869.

ever, was deferred on the vessel, on account of the more favorable conditions for the performance of the operation in the hospital; the delay in the transmission there of the patient not being anticipated."

Dr. JAMES TYSON said he was reminded, by Dr. Cleemann's case, of another on which he had made the post-mortem examination, which was striking in its parallelism in some points, while in certain other respects it was essentially different.

The case was that of a gentleman about 60 years of age, much addicted to the use of alcohol, who fell upon the ice, walked several squares to his house, and retired to his room. He was in the habit of remaining in his apartment for days at a time, and a similar course at this time did not attract any attention. At the end of thirty-six hours, however, his room was entered, and he was found unconscious and in a dying condition. He was dead when Prof. F. G. Smith, who was called to attend him, entered the room.

There was total ignorance as to the cause of death, and a post-mortem examination was requested with a view to its determination. On inspecting the body, the fingers were found tightly flexed upon the palms, whence it was inferred that he had died in a convulsion. On removing the calvaria and opening the dura mater, a huge clot was found *beneath* the latter, and covering the whole of the anterior half of the right hemisphere, depressing it decidedly, and extending down beneath the base of the brain. *There was no fracture of any portion of the skull.*

The PRESIDENT asked whether there were any evidences on the scalp or tissues beneath which would indicate that the patient had in falling struck his head with violence. It is not improbable that in cases where the walls of the blood-vessels are much diseased, a spontaneous rupture might occur so as to occasion a clot in that position. Hemorrhage into the arachnoid or sub-arachnoid space is not very rare, and, in a large proportion of the cases where he had himself met with it in adults, had been associated with chronic intemperance. The symptoms which characterize meningeal hemorrhage are quite peculiar, and it is possible that at the moment of the hemorrhage a person should fall, but afterwards be able to rise to his feet and find his way home. It is interesting, therefore, to learn whether any evidence was found of such an injury caused by the fall as might have produced this hemorrhage, either by direct violence or by counter-stroke.

Dr. TYSON said there were no evidences of contusion of any part of the scalp or subjacent tissues.

Dr. CLEEMANN remarked that the case, in connection with his own, illustrated admirably the conditions under which trephining might on the one hand be of service, and on the other clearly useless. Thus, in Dr. Tyson's case the position of the clot beneath the dura mater permitted the blood to pass down beneath the brain, so that even if the seat of hemorrhage was reached by the trephine, the operation would avail nothing. But in his own, the clot being external to the dura mater, and therefore circumscribed, its removal was quite within the range of possibility.

He desired to know of Dr. Tyson whether there was any breach of continuity in the brain-substance, as is usual when convulsions occur in like cases. He thought that the convulsions in his own case were evidently of a reflex nature, caused by the uncomfortable position of the man as he lay in the cabin. He thought the brain was in that condition in which it was exceedingly susceptible to irritation, and that under these circumstances the patient would be thrown into convulsions from comparatively trifling causes. He took much interest in these phenomena of the case, from their resemblance to those of certain cases of puerperal convulsions, in which, the brain being already in a state of irritability

from the presence of serum constituting an œdema, as it were, the slightest external irritation would excite a convulsion of great violence.

Dr. TYSON replied that the brain was evidently compressed in this case, but there was no breach in the integrity of its structure.

Soft cancer (encephaloid) of the kidney and of the lumbar glands(?).

Dr. TYSON also presented a specimen of encephaloid of the kidney, removed from a farmer aged 52 years. The case first came under his observation about eighteen months ago, as one of hæmaturia. The hemorrhage had first occurred in the spring of 1873, but for four years previous there were frequent attacks of lumbar pain, which were at first attributed by the patient and his friends to lumbago. They were, however, periodical, and often of extreme severity, and he had actually once passed a small stone, which, from the description of a highly intelligent person who saw it, would appear to have been a mulberry calculus. With these facts before him, Dr. T. was not slow in deciding that the case was one of impacted calculus, although the blood was copious, and there were sometimes coagula. The urine was, of course, highly albuminous, but a microscopic examination, made in August, 1873, revealed no casts. After he came under observation the hemorrhages remained absent for as much as four weeks at a time, but gradually became more frequent, as did the attacks of lumbar pain, which finally became continuous and extreme. The patient gradually became weaker and lost flesh, notwithstanding supporting treatment. Œdema of the right leg appeared, and subsequently extended to the left, and by Christmas, 1873, he was entirely confined to bed. Dulness was now apparent over the region of the right kidney, and the real nature of the disease was suspected, although before this the presence of incontinence of urine also led to the suspicion that the bladder might be involved, a symptom entirely explained by the condition of the spinal cord found post mortem.

He lingered, requiring the constant use of opiates to subdue the pain, until about October 23, when he died.

The post-mortem examination was made by Dr. Hunsberger, of Blandon, Berks County, Pennsylvania, who kindly forwarded the specimens. They consisted of the bladder, two kidneys, and a portion of the tumor. The former organ appears to be healthy, but the left kidney is enlarged, while the right is converted into a trabecular connective-tissue frame-work, the interstices of which are occupied by the usual brain-like substance of soft cancer. The proper situation of this organ was occupied by a large tumor, extending down to the crest of the ilium and eroding the bodies of three or four lumbar vertebræ. Sections of the portion of the tumor sent were made, and found to present the microscopical characters of encephaloid or soft cancer. Pushed up to this tumor, and lying in contact with the stomach, to which it was adherent, was the right kidney, presenting the characters described.

The lungs and liver were the seats of secondary deposits.

A most interesting question in connection with the case is the relation of the large tumor encroaching upon the vertebræ and the cancer of the kidney. The history of the case would seem to point to the former as primary, but it is much to be regretted that the examination did not determine the exact seat of its incipency.

The PRESIDENT said the specimens recalled a case which he had had the opportunity of watching several years ago, in the person of a young man of healthy family history. The lumbar tumor was on the left side, and to it the kidney was closely attached; but, while its ureter was somewhat compressed, the substance of the

kidney was not actually involved by the disease. In this case the periodical character of the lumbar pain was so marked and so extreme as to lead, during the earlier period of the case, to the suspicion of aneurism, although other symptoms of aneurism were wanting. It, however, ran the same course as Dr. Tyson's case, terminating in paralysis and œdema of the lower extremities. There was no abnormal condition of the urine. The right kidney was healthy; the left was flattened and adherent to the lumbar tumor. Its ureter was constricted by adhesions, and the kidney somewhat sacculated in consequence. The mass proved to be a soft cancer of the vertebral glands. The vertebræ were eroded, and prolongations of the growth had extended through the foramina into the spinal canal, and the spinal cord was compressed and softened in its substance.

It is well known that cancer of the kidney is rare, and that changes in the urine are uncertain and inconstant. He had happened to meet several cases of cancer of the kidney which ran their entire course without marked changes, without hæmaturia, albuminuria, or peculiar cells in the urine. In other cases, again, there is the presence of albumen, more or less characteristic cells are found in the urine, while marked attacks of hæmaturia form a very important symptom.

REVIEWS AND BOOK NOTICES.

LECTURES ON DISEASES OF THE RESPIRATORY ORGANS, HEART, AND KIDNEYS. By ALFRED L. LOOMIS, M.D. New York, William Wood & Co., 1875.

The book before us is from one point of view a good one. It is clear in style, conventional in arrangement, very definite and practical in its teachings,—a valuable book for students and for practitioners of a certain class.

Yet after careful examination we fail to find in its pages adequate reason for its publication,—intrinsic *raison d'être*. Its style, though clear, is inferior to that of many recent writings on kindred subjects; the arrangement of topics, though more or less like that usually adopted, is in no way better, and is open to objections on logical grounds: thus, phthisis, which in all its forms is regarded by the author as inflammatory, is not placed in its proper order among or after inflammatory diseases of the lung-tissue proper, but after pleurisy, and the consideration of a pathological new formation, cancer of the lung, is interposed between pulmonary congestion and pneumonia. The descriptions of diseases are excellent, and show patient clinical study and extensive reading; but the parts on morbid anatomy are far from thorough, and have a gotten-up-for-the-occasion appearance by no means satisfying to the anxious inquirer; there is also a disdain of authority in therapeutics which savors of dogmatism. Indeed, reference to authority does not often divert the author from the thread of his narrative, contrary to our expectations in a volume whose pages are almost, if, indeed, not wholly, guiltless of original observations. True, the name of Dr. Bright appears in connection with diseases of the kidney, and those of Virchow and Dr. Stewart with their classification; yet it seems to us that *Dixi* would have been no very inappropriate legend at the foot of the final page. The students to whom this book will be most valuable are those who attend the author's lectures, for in it they have, as the preface tells us, a complete shorthand report, and will thus escape the drudgery of note-taking; those practitioners whose shelves are scantily supplied with modern books on general medicine will find this a clever monograph on the special subjects.

The terms "*croupous*" and "*lobular pneumonia*" are

retained, in spite of their inaccuracy and the fact that the former suggests an analogy to pseudo-membranous croup which is not established, whilst the latter has been a source of dire confusion to several generations of writers on pneumonia.

Hay-asthma is clipped of its outward flourishes in seven lines of large type.

A list of remedies for the sweats of phthisis seems to us incomplete when it fails to include atropia, which, though not well borne for any length of time, may often be given with certainty of success in advanced cases, when other means have lost their power, and when even a temporary relief from this harassing symptom is a great boon to the patient.

A few instances of careless proof-reading meet the eye; such as *nitrate of amyle*, p. 427; the omission of a comma in the third line after the heading Prognosis, p. 101, which gives rise to a startling perversion of the sense; and the calm statement that, in pneumonia, "Among the symptoms which may be regarded as unfavorable is a temperature exceeding 105.8 F.," p. 159.

To the last the most frisky of physiologists will doubtless at once accede without experimental confirmatory proof.

The mechanical work is worthy of all praise.

J. C. W.

GLEANINGS FROM OUR EXCHANGES.

MEANS FOR RELIEVING CHRONIC PHTHISIS.—Dr. James Little contributes to the *Dublin Journal of Medical Science* for January an article "on the means most generally useful for relieving the cough, sweating, and dyspepsia of chronic phthisis." For the relief of the second condition, five grains of Dover's powder administered at bedtime will check phthisical sweating more frequently than any other remedy. Next to it is atropia or its sulphate, best given in the form of pill $\frac{1}{100}$ to $\frac{1}{80}$ of a grain. To prevent the great discomfort of the damp night-dress, Dr. Little advises a large loose night-dress of fine flannel.

For the relief of cough Dr. L. advises a mixture of morphia, atropia, hydrocyanic acid, and syrup of wild cherry. When the expectoration is very tenacious, this mixture does not suit so well as one containing small doses of iodide of potassium with bicarbonate of sodium, hydrocyanic acid, and compound tincture of chloroform. To this, small doses of tincture of opium may be added. This mixture may be taken at short intervals, and continued until the expectoration becomes easier.

In cases where great distress arises from the pain produced during violent coughing by the stretching of old pleuritic adhesions, the play of the diseased lung may be limited by adhesive straps. Dr. Little has used with success strips of dimity five inches wide, and long enough to extend from sternum to spine. One or more may also be drawn across the shoulder, from the interscapular region behind to the mammary in front. Thus supported, the chest-walls are no longer injured by the concussion of the cough, and the greatest relief follows. Chloral to the amount of ten grains in each dose of an opiate cough-mixture will render the effect more immediate and permit a smaller quantity of opiate to be employed. Chloral lozenges are also useful in the case of consumptives who are still going about. In the dyspepsia of phthisis, where there is simply an utter loss of appetite, the only combination which seems to give relief is that of strychnia with phosphoric or hydrochloric acid. It may be given in infusion of columbo or of orange. When, with loss of appetite, there is a feeling of load after food, a dessertspoonful of pepsin wine, with ten minims of hydrochloric acid in a little water after a meal, usually relieves. In pain, flatulence,

cough, and vomiting after meals, tonics and cod-liver oil must be given up for the time, and a regulated and rather spare diet, together with counter-irritation to the epigastrium, must be employed, together, if necessary, with some of the aperients which act upon the upper part of the intestinal tract and some of the medicines which are good against gastric catarrh.

COLD-POWDERS.—Dr. Beard has for some time been using a "cold-powder," the composition of which is as follows: camphor, five parts; dissolve in ether to the consistence of cream; then add carbonate of ammonium, four parts; opium-powder, one part.

Mix, and keep in tightly-corked bottle. The dose is, of course, regulated by the opium, and ranges between three and ten or fifteen grains. He has been accustomed to prescribe it for his friends by the finger-nailful, or as much as can be put on the finger-nail.

This powder may be taken in a little water just before retiring, by preference, or at any hour of the day, whenever there is a *suspicion of having caught cold*. If need be, a moderate dose may be taken several days in succession.

The advantages of this powder are said by Dr. Beard to be:

1. The taste is agreeable, or at least is not disagreeable. Even the bitterness of the opium is mostly neutralized by the camphor and ammonia. No child objects to it.

2. It is singularly and inexplicably efficacious. He believes it to be more efficient than Dover's powder, and incomparably more agreeable. In some cases it produces gentle perspiration; in others, its effect is not observed.

POISONING BY ACONITE.—At a recent meeting of the New York Pathological Society, Dr. Blake related the case of a lady who had taken, by mistake, internally a drachm each of tincture of aconite and chloroform. In the course of half an hour all the contents of the stomach had been evacuated by the stomach-pump. Within fifteen minutes of the accident, the characteristic symptoms of the poison appeared. She became insensible; pulse and respiration ceased. Life was maintained for three hours by the use of a powerful battery, and by the employment of oxygen gas, mixed with equal parts of air. At the end of three hours the pulse began to be faintly perceptible. The urine was found loaded with albumen, and containing fragments of casts. This was at first supposed to indicate a chronic disease of the kidney, but later nothing abnormal was observed in the urine. The patient recovered. The possibility of the kidney-trouble being merely temporary, and occasioned by the irritating effects of the poison, was strengthened by the fact that the skin was profoundly impressed, there being a static congestion of its surface, and the cuticle peeling off on being rubbed.—*New York Medical Record*.

HYPERPYREXIA IN RHEUMATISM SUCCESSFULLY TREATED BY THE COLD PACK.—Dr. Stewart Lockie reports (*Lancet*, February 13) a case of acute rheumatism under his care, in which the temperature rose to 104° on the tenth day, 103.6° on the eleventh, and 106.8° on the evening of the twelfth. It was then determined to attempt to reduce the temperature by the application of cold. A vessel of water with lumps of ice in it was brought to the side of the bed, water-proof sheeting was placed below the patient, and sheets wrung out of the ice-water were wrapped around the body, the sheets being wrung out every few minutes as they became warm. A teaspoonful of brandy was administered every quarter of an hour. At the end of fifty minutes the temperature had fallen to 99.6°, when she was taken out and put between blankets. She fell asleep soon after, and when she awoke, half an hour

later, the temperature was 97.8°. Two hours later it had fallen to 96°. It then rose, and during the subsequent days of the patient's illness never (excepting once, when for a few hours it attained 104°) rose above 102.2°. No further cold applications were used, and the patient made a good recovery.

FOREIGN BODY IN THE BRONCHUS (Dr. Woolverton: *Boston Medical and Surgical Journal*, March 4).—A sailor, while smoking a short clay pipe as he lay in his hammock in an intoxicated condition, fell to the deck, a distance of five feet, sustaining various contusions. Immediately after the fall he had difficulty of breathing for fifteen or twenty minutes, and, although very drunk, screamed with pain, and put his hand over his sternum. During the next four days he complained of cough which "hurt" him, and tenderness about the inferior angle of the scapula. Mucous râles over left side, but respiration free throughout. On the fourth day he ejected during a violent paroxysm of coughing a piece of clay pipe-stem three-fourths of an inch long. He recovered without untoward symptoms.

MISCELLANY.

HIGH, LOW, JACK, AND THE GAME-O'PATHY.—Who is to decide, and how is it ever to be decided, when doctors disagree? The Jack regulars call all Homœopaths quacks; the High call the Low-dilutionists mongrels. Is it any wonder, then, that the Jacks have all the government and state pickings, while the Homœopaths are left out in the cold to fight among themselves? And yet there is as great a difference between the High and Low potency men as there is between the Lowpathics and the Allopathics. The High are Symptomatologists; the Low are Pathologists. The High give a dose every one or two weeks, and placebo the case through; the Low give a dose every half-hour or hour, and, if characteristic of the disease, cure their patient quickly.—*The U.S. Medical Investigator* (Homœopathic).

A DOCTOR was called in East Hartford to a man, age 66, who was excessively rheumatical. "How long have you had it?" said the doctor. "Forty years," responded the sufferer. The doctor left without prescribing. We cannot tell how much we should like to see even a partial list of the remedies to which, during his life, our Connecticut martyr has probably resorted. He has carried a roll of brimstone in his left pantaloons pocket; he has carried a bit of magnetized iron in his right ditto; he has floated, so to speak, in pain-killer; he has put his trust in "cam-fire," and likewise in capicum. Whatsoever things are hot or bracing, or tonic or rubefacient, he has resorted to; to the "king of pain," to the "ready and rapturous relief," to oils, to ointments, to poor man's porous plasters, to red flannel shirts, to galvanic braces, to opodeldoc, to herbs, and roots, and seeds,—to all things which grow or flow, which are dug from the bowels of the earth, which are extorted from crucibles, which drop from retorts, which are rosy or pale in apothecaries' bottles; to powders, to tinctures, to decoctions, to pills, to essences, to panaceas, and to elixirs; to boluses, and globules, and infinitesimal dilutions; to hot rum and water, to cold gin and

sugar, to brandy plain, to sweats and to starvation, to flesh diet and to fish diet and to fowl diet,—and all in vain.—*Tribune*.

GRADUATES IN MEDICINE.—The graduates in medicine of the nine universities of Prussia, Germany, are compelled by law to present themselves before a "State Board of Medical Examiners" for examination before they can be licensed to practise medicine in that State. This same law exists, and is rigidly enforced, in the other States of the German Empire; likewise in Austria, France, England, and in nearly all of the other prominent countries of the world, with the exception of the United States of America.

The following table shows the result of the examinations in Prussia during the past year, and conveys also an idea how rigid these examinations are, for about twenty-five per cent. of the candidates were rejected; and we might further add that no candidate is allowed to go up for examination unless he can prove by certificates that he has attended at least eight courses of medical lectures,—equivalent to four years' study:

1873-74.

Universities.	No. of Candidates.	Passed.	Rejected.
Berlin,	124	89	35
Bonn,	39	33	6
Breslau,	37	32	5
Göttingen,	34	32	2
Greifswald,	81	61	20
Halle,	63	49	14
Kiel,	21	18	3
Königsberg,	45	25	20
Marburg,	33	30	3
Total,	477	369	108

The sum total of physicians licensed in the whole German Empire for the year 1874 is only 660.

During the same year the innumerable medical colleges of the United States of America graduated three thousand students.

In conclusion, we add, for comparison, the following table:

1874.

Country.	No. of Inhabitants.	Practitioners licensed in 1874.
Germany,	42,000,000	660
United States,	40,000,000	3,000

Further comment is unnecessary.—*Canada Lancet*.

FOR CLEANING BRASS.—Finely-rubbed bicarbonate of potassium mixed with twice its bulk of sulphuric acid and an equal quantity of water will clean the dirtiest brass very quickly.

The Central Middlesex (London) coroner has caused a great excitement by insisting upon an inquest of the late Sir Charles Lyell.

NOTES AND QUERIES.

PORT GIBSON, MISS., March 20, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

I was called, a few days ago, to see a negro girl who was suffering from epileptic fits. She had been delivered three or four weeks before of a fine,

healthy child, of the ordinary size, and did well till the attack of the fits. She was only twelve years and four months old at the time of her delivery, is well grown for her age, and, as I learned from her mother, had menstruated only once before conception,—a very remarkable case of early maternity.

R. G. WHARTON.

A STATED meeting of the Northern Medical Association of Philadelphia will be held at their hall, 608 Fairmount Avenue, on Friday evening, April 9, at 8 o'clock.

Subject for discussion, Catarrhal Pneumonia following Collapse of Lung: to be introduced by Dr. Edward R. Stone.

The medical profession are cordially invited.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held at the hall of the College of Physicians, Wednesday, April 14, at 8 o'clock P.M.

Dr. W. B. Atkinson will read a paper on "Chloral."

The medical profession in the city are cordially invited to be present.

OBITUARY.

DIED at Easton, Tuesday, March 16, Dr. CHARLES C. JENNINGS.

Dr. Jennings was born in a small town about twelve miles from Bridgeport, Connecticut, in 1806. At the age of fourteen he began teaching school, and continued in that vocation until he was eighteen, when he commenced the study of medicine at Philadelphia. In 1840 he commenced practice at Riegelsville, Pennsylvania, but in 1850 moved to Easton, where he practised continuously to the time of his death. From 1861 to 1865 he was postmaster of the city.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The reply which I hereby offer to a communication in your last issue respecting an article which I read before the Philadelphia Medical Society, entitled "A Case of Purpura Hæmorrhagica requiring Transfusion," is simply this. In accordance with a request from the Secretary, I consented to read a paper bearing the above title. Those who were present and heard it read will undoubtedly bear testimony to the fact that the article was given strictly in accordance with the title, and also without referring in the least to credit for operative procedures which did not belong to me. I presume that those who know me will bear testimony that it is not my disposition to arrogate to myself a notoriety based upon the talents or work of others, and in this report of a very interesting case it was my object more to describe the condition requiring the operation of transfusion than the operation itself; judging that the latter would form the subject of a paper by Dr. T. G. Morton, as a report of an additional case to the many upon which he has so successfully operated.

Respectfully,

J. M. BOISNOT.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 23, 1875, TO MARCH 29, 1875, INCLUSIVE.

GRAY, C. C., SURGEON.—When relieved by Assistant-Surgeon Jackson, assigned to duty as Post-Surgeon at Fort Brown, Texas. S. O. 52, Department of Texas, March 22, 1875.

WHITEHEAD, E., ASSISTANT-SURGEON.—Granted leave of absence for one month on Surgeon's Certificate of Disability. S. O. 52, c. s., Department of Texas.

HOFF, ALEX. H., ASSISTANT-SURGEON.—Relieved from duty at Fort Columbus, New York Harbor, and to take station in New York City during his duty with the Army Medical Board. S. O. 50, A. G. O., March 24, 1875.

DE WITT, C., ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 37, Department of the South, March 22, 1875.

ADAIR, G. W., ASSISTANT-SURGEON.—Assigned to temporary duty at Ringgold Barracks, Texas. S. O. 52, c. s., Department of Texas.

JACKSON, D., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Duncan, Texas. S. O. 52, c. s., Department of Texas.

WIGGIN, A. W., ASSISTANT-SURGEON.—Died at Fort Stevens, Oregon, March 7, 1875.

SATURDAY, APRIL 10, 1875.

ORIGINAL COMMUNICATIONS.

ON THE USE OF ALCOHOL IN THE TREATMENT OF DISEASE.

Read before the Philadelphia County Medical Society, January 27, 1875,

BY J. C. MORRIS, M.D.

IN approaching the consideration of my subject this evening, gentlemen, I feel that perhaps a few remarks may not be inappropriate as to the point of view we are to select, as this will be likely to influence materially the impressions to be derived from the facts we are to examine, and the conclusions we may draw therefrom.

In the first place, then, as physicians, our duty is to acquaint ourselves, as thoroughly as we may be able, with the physiological and pathological effects of the various articles and substances which are in daily use around us or by us, either as food or medicine, or which are capable of becoming either the one or the other; to study and promulgate honestly the truth about them, moved neither by fear nor favor, and freeing ourselves as far as possible from the Hudibrastic accusation of "compounding for sins we are inclined to, by damning those we have no mind to." Truth, simple, full, and entire, is the best antidote for the dangers which too often arise from an imperfect or one-sided view of things.

In the next place, we must remember that we are not only physicians, but *men* who have an interest in society, and a duty to perform towards it. This duty indeed is a double one: to restore health as far as possible to the sick, or to alleviate their sufferings; and, so far as in us lies, to protect and elevate the moral tone of the community in which we may dwell. Such is and always has been the aim of our noble profession, which has been and is honored in proportion to the faithfulness of its members to this aim.

But in connection with the use of alcohol, the questions have frequently been raised of late, Are the medical profession in the habit of prescribing alcoholic drinks and preparations so as to be of benefit to their patients? Does alcohol do good under any circumstances? Do physicians' prescriptions and directions encourage intemperate habits in their patients or the community? Probably there is not one of us who has not been asked, or who has not asked himself, these or similar questions, as we have been called upon to witness the terrible effects of the abuse of alcohol; probably there is not one of us who has not felt at times inclined to proscribe, professionally and socially, the employment of an agent which produces such devastation in our midst. It is not my intention to read a moral essay on the subject; this is neither the time nor the place; but I do feel that it is right and necessary to enunciate clearly and distinctly the proposition that the moral character or tendency of remedies proposed is not and cannot be a matter of indifference to a true and honest physician; he is bound, on the contrary, by

all he holds dear or sacred, to give no advice, even as indirectly as Balaam did to the Moabites, which may endanger or lower the moral tone of his patient or the community; but to help social reform, and intellectual as well as physical progress, in every way in his power.

Let us inquire, then, first, what are the physiological effects of alcohol? second, what are the indications for its employment? third, are there any articles known to us which will substitute it? fourth, should we employ it or not?

1. The medical press of the last ten years has abounded in articles on the physiological effects of alcohol, its effects on the pulse-wave and on temperature, and its value as food or medicine. Those who desire to investigate what has been done will find themselves amply repaid by consulting the papers of Anstie, in *The Practitioner*, Thudichum and Dupré's Treatise on Wines, or H. C. Wood's Therapeutics.

But I do not propose so much to reproduce the thoughts and results of these writers as to record my own observations. The effects of alcohol should be carefully distinguished from that of æthan-*thic* ether, etc., as has been pointed out by Thudichum and others, but is too apt to be forgotten. Nor should the tranquillizing, lethargic effect of hops be omitted in considering the effects of beer and ale. It has occurred to me to be a witness of the striking difference between beer and light wine upon large masses of persons. During the Sängersfest held some years ago in this city, I went with Prof. Bridges to Lemon Hill, and there saw about seven thousand of our German fellow-citizens enjoying themselves of a summer afternoon and paying high court to King Gambrinus. The quantities of lager that flowed were simply enormous; yet all was orderly, decorous. The hilarity was moderate. One American, who had imbibed some whisky before entering, became uproarious and combative, and was taken in charge by the police. A shower of rain brought the open-air festivities to a close. Dr. B. and I took refuge in the doorway of a rolling-mill, past which the whole mass poured itself on its way to the city. Good humor, placid booziness, gradually passing into a lethargic indifference to the inconveniences resulting from the jostling of the crowd, were all that we saw.

Upon another occasion, at the Schützenfest in Frankfort-on-the-Main, in 1862, I saw a larger crowd of persons of the same race, gathered in the immense building erected for their accommodation, listening to the music from the various national bands which had assembled there in friendly rivalry, and drinking freely of light wines which flowed on all sides like water. Hilarity was the order of the day. Dancing, singing, friendly gesticulations, hearty greetings,—all the social side of man brought out in the highest degree. Not one instance of intoxication, as we understand it, did I see. Many were somewhat exhilarated, but this subsided gradually, and gradually the assemblage dispersed, gayly and good-humoredly. How many had headaches and empty pockets to greet them on their return

next day to the work-a-day world, I leave for others to conclude.

Of the maddening effects of alcohol on masses of men on a large scale, I have no personal experience to narrate. But the void may easily be supplied by any one who has witnessed a tavern row or who has read the account of the scenes which occurred in Paris when Louis Napoleon, in order to obtain recruits for the Franco-Prussian war, gave the rein to alcoholic indulgence.

When taken in moderate quantities, alcohol produces the following results. The pulse becomes firmer, fuller, harder; the capillaries are filled with blood, which circulates more rapidly in them; the life-changes and functions of all the organs are performed more energetically. To this succeeds a corresponding period of depression, when the pulse beats frequently but feebly, and the functions are all languidly performed. Between these stages there is an intermediate one of stupor, varying in degree and intensity with the quantity of alcohol taken, its rapidity of absorption, and the susceptibility of the individual. How shall we explain these phenomena? The first stage is undoubtedly the result of the direct stimulation of the vaso-motor nerves and of the cerebro-spinal system. This explains the increased exertions, both mental and physical, the heightened courage of the individual. But the same amount only of blood is circulating as before, only with twice the rapidity. It becomes unfit for the repair of the nerve-centres and the continued evolution of nerve-force; the lungs, though moving more deeply and rapidly than before, fail to rid the blood of the increased carbonic acid, which comes from double tissue-waste upon them, reinforced by the decomposing alcohol itself; and a venous stasis commences, marked by a lethargic state of the individual. Gradually the system frees itself from the accumulation, and then the exhausted nerve-centres must wait till fresh food and time for their repair have restored their powers. To follow the effects of alcohol into the domain of pathology, and show the tendency from often-repeated venous congestion to fatty or other degenerations of kidneys, liver, and heart, to epileptiform disease or cerebral softening, is easy and very tempting; but we are considering the physiological, not the pathological, effects. Nor are we here to consider the moral effects; though I cannot help alluding to one striking difference between alcohol and opium, in the crimes they tend to encourage in their victims. The former will stimulate to acts of brutal violence, such as murder; the latter, to those of cunning, such as forgery, or fraud. The former renders a man a nuisance to society, even more than to himself,—a pariah. The latter makes him a nonentity in society, useless, or perhaps hurtful if he be malicious, but a very torment to himself.

2. The indications for the employment of alcohol may easily be drawn from what has been said, as well as the dangers arising from its injudicious or too prolonged employment. It is more nearly a universal stimulant than any other. Where from any cause the vital powers are depressed, and the functions consequently are defectively performed,—

when the circulation, especially, and the nervous energy are unequally distributed,—there we need an agent capable of rousing them temporarily to proper activity, that the needful roborant virtues of food and rest may have time and opportunity to reinvigorate permanently the system. The latter, food and rest, are the only real tonics we possess. These, with healthy (or as nearly so as possible) performance of function by the various organs of the body, maintain that natural system of exchange of the particles of matter entering into our organization, which we call health and life. All other so-called tonics are really only more or less diffusible stimulants. From this it will appear that there is hardly any severe or long-continued illness in which, at some period or other, the use of alcohol in some form may not be indicated. To be of benefit, it should be so employed as to avoid the latter stages. This may be done by using it in small doses, combined with food, or with some more permanent tonics for the absorption and action of which it prepares the system. Used in this way, it may be, and often is, as will appear from what follows, of the greatest benefit,—a powerful agent for good when properly applied, as well as a most dangerous and terrible agent for evil when wrongfully tampered with or indulged in. This has caused its abandonment by many good and earnest men, who have sought to replace it by other means. Let us examine these.

3. Carbonate of ammonium, turpentine, capsicum, and musk are the principal articles which have been at various times proposed or used instead of alcohol. Of the effects of the latter as a general stimulant I have but little personal knowledge. Judging from what I have seen, I should consider it as a stimulant of the emotional nerve-centres, with a secondary influence upon the vaso-motors. Capsicum acts by its local irritant properties, and may, perhaps, produce a sort of secondary reflex irritative fever. It has been recommended and used as a succedaneum to alcohol, and is supposed by many practitioners to be reliable as such. But experience with it in hospital practice in this city has not confirmed this view. It is of great use in flatulent dyspepsia from atony of the bowels, and in the chronic gastritis of drunkards, rousing the exhausted organ to some attempt to perform its duty. But here its usefulness ends. Turpentine, too, acts as a local stimulant to the tissues with which it is brought into contact, and, from its ready absorption, stimulates the circulation by vaso-motor action, rendering the pulse firmer, harder; it also stimulates the action of the kidneys and lungs. But its action on the nerve-centres is comparatively slight; and hence it fails in arousing the system generally to increased activity. The same may be said of carbonate of ammonium and of aromatic spirits of ammonia. These have the property of producing arterial excitement probably from the direct irritation of the tissues with which they come in contact. They are useful as adjuvants,—the former especially when the respiration is embarrassed,—but, from their want of direct action on the cerebro-spinal nervous system, cannot take the place of alcohol. We therefore come to

the consideration of the fourth question: whether, knowing and acknowledging its dangers, we should employ alcohol as a remedy? And, if so, how and when should we give it?

The same argument as to dangerousness applies to other agencies without which civilized life has never been found to exist. Like fire, alcohol has been shown to be "a good servant, but a bad master." In illustration of its value I adduce the following statistics, taken from the records of the Protestant Episcopal Hospital in this city. It occurred to me that, by comparing (if they could be obtained) the results of the treatment of some one disease under similar circumstances by practitioners of similar views generally, but differing in this respect, an opinion might be based upon the facts presented. Typhoid fever is above all others a disease in which good nursing and care, little medicine, and a supporting treatment are required. I therefore requested Dr. S. R. Knight, the superintendent of the hospital, to furnish me an abstract of all the cases of typhoid fever treated by three physicians whose views on the use of alcohol varied as follows: Dr. A. prescribed it sparingly (say $\frac{1}{3}$ xii to $\frac{1}{3}$ xvj of milk-punch — one-fourth whisky) daily; Dr. B. from $\frac{1}{3}$ xvj to $\frac{1}{3}$ xxiv; Dr. C. from $\frac{1}{3}$ xxiv to $\frac{1}{3}$ xlvi. I need not say the result surprised me.

Table of Cases of Typhoid Fever treated at the Protestant Episcopal Hospital; their duration and results.

PHYSICIAN.	YEARS.	TOTAL.	RECOVERED.	DIED.	DAYS IN HOSPITAL.	REMARKS.
A.	1864-1872	65	48	17	34½	Three were moribund on admission; died in less than forty-eight hours.
B.	1864-1872	56	46	10	35	One surgical case, fatal, with typhoid as complication.
C.	1864-1868	26	25	1	39½	

Of the 65 cases admitted under Dr. A., one died in a few hours, and two more in from twenty-four to forty-eight hours; these may be regarded as moribund on admission, and the figures would then show a mortality of 14 in 62 cases (1 in 4½), or more than 22 per cent. If we throw out also the one in which typhoid fever showed itself during the treatment of a fractured arm from railroad-injury, and proved fatal, and which, as far as I can ascertain, was never actually under the charge of Dr. B., the figures would give 9 deaths in 55 cases (1 in 6), or more than 16 per cent. The result of only 1 death in 26 cases under the charge of Dr. C., giving a mortality of less than four per cent., is well calculated to attract our closest scrutiny. The disease seems to have been of a severe, malignant type in 1864, and also, though in a less degree, in 1870-1872; and the figures for Dr. C. (who was not then connected with the institution) might have modified the total percentage somewhat if they had embraced those years. On turning to Dr. Wood's Practice of Medicine, we find that the mortality has varied from 1 in 3½ to 1 in 25 in different years in the Massachusetts General Hospital; nay,

from November, 1836, to November, 1838, there were 55 cases without one death. But all this will not explain away the facts given above, and I find myself forced to the conclusion that the free exhibition of alcohol is of decided advantage in the treatment of typhoid fever. And in all similar conditions of prostration of vital forces we must have recourse to it. The particular form under which we may administer it will vary according to the collateral effects which may be desirable. Thus, should it be desirable to quiet an over-sensitive nervous system, to invigorate digestion and increase fatty deposit, the malt liquors will answer our purpose. Should we on the other hand desire rather to stimulate the cerebro-spinal system and quicken digestion, we will find the lighter wines more useful. In these the ænanthic ethers produce a large proportion of their effect. What this is may be judged of from the effect of nitrite of amyl, an analogous substance, and one that may be added, in very small quantity, to a light wine of low grade, with good results. The extremely minute proportion of ænanthic ether present in natural wine renders it necessary to use this mode of illustrating its activity. The resemblance between the effects is very close. If, on the other hand, an equalization of the circulation and a general stimulation be our aim, the heavier wines, whisky, brandy, gin, or rum will have to be resorted to. The former (when free from fusel oil, which acts as a violent cerebral stimulant and irritant) is the best form of alcohol for administration. It should be made from rye or wheat, not from potatoes, barley, or corn. If an astringent influence on the bowels is desired, brandy among the liquors, and port among the wines, will be preferred; the latter also in cases of debility from hemorrhagic tendency. If a laxative, rum; if a diuretic, gin among liquors, or hock among wines. American wines are, many of them, good of their class, but time and experience in their production in our climate are still needed to enable the manufacturers to rid them of a certain roughness and earthiness, instead of masking these disagreeable qualities by the introduction of sugar. Speaking generally, the less sugar a wine contains the better it is adapted for medicinal employment. In the fermentation of grape-juice, alcohol is produced from the sugar present until the latter is exhausted or a certain percentage of alcohol is formed; if less sugar is present than is required for this percentage, acetous fermentation takes the place of the alcoholic; if more, the wine continues to "improve" by the slow development of ænanthic ether, etc., in consequence of a different form of fermentation; this is analogous with the slow fermentation of lager beer, instead of the ordinary brewing of ale. As long as the sugar lasts this process may continue, until the wine becomes "ripe;" after this it deteriorates, tends to undergo acetous fermentation, and is unfit for use.

Three things should ever be borne in mind in the administration of alcohol, except in cases of shock or hemorrhage: 1. It should be given in small, definite quantities, at intervals of three or four hours generally, so as to produce repeatedly the primary

effects, and avoid the second and third stages of its action. 2. It should always, if possible, be accompanied by food, which may thus aid in the permanent invigoration of the patient. 3. It should be withdrawn gradually, but steadily, as the patient regains strength, and no patient should be left to the continued use of it after recovery. While the disease or debility continues, large quantities will often be necessary, but as the powers of the system are restored the desire for it will lessen and disappear, unless an unnatural appetite or craving is awakened. It has been my experience that patients generally readily and gladly assent to its withdrawal as to that of other medicines, when the need for it has ceased; and, after a practice of more than twenty years, I have yet to have upon my conscience the knowledge that one fellow-being has fallen into habits of intemperance (so far as I know) from my prescription.

I would add one hint: when a patient complains of being heated, flushed, rendered uncomfortable, by the administration of alcohol, revise your diagnosis. It may be that you are administering it in an unsuitable form; or that there may be some form of irritation or inflammation other than you have detected; or the constitution and idiosyncrasy of the patient may be such as to render it injurious instead of beneficial.

I feel as though I could not conclude this paper on the use of alcohol without an additional word of caution as to its *abuse*. Of all men, the doctor especially should be free from encouraging by precept or example the habitual employment of alcohol. Its daily use tends to disease, to shortening of life, to lessening its enjoyment. It was a severe definition, but one, unfortunately, not farther from the whole truth than such definitions generally are, which was given by the late Rev. Dudley A. Tyng,—"The man to whom even one glass of liquor a day is a *necessity*, is a drunkard."

NOTES ON A CASE OF THROMBIC ABSCESS, ASSOCIATED WITH DIFFICULT ERUPTION OF DECIDUOUS TEETH.

BY J. E. GARRETSON, M.D.

AMONG the first of the days of the last month I was invited by a professional friend to see his child, an infant one year of age, laboring under the difficulties of a multiple tooth-eruption. Examination of the mouth discovered six bag-like cysts overlying the regions of six different teeth; neither mouth nor system was feverish, but the irritability at large was most marked. In lancing the different cysts, each ejected with considerable force its serous-like contents; yet, quite contrary to expectation, no amelioration in the irritability resulted from the operation.

Next there developed in the right gluteal region an abscess of a cold nature, which with great quickness involved the inter-muscular tissue, and found its way into the perineum, sloughing out in mass the cellular structures of the ischio-rectal fossa. After a week this extensive abscess yielded to the opposing forces of nature, and the parts filled up rapidly, affording promise of speedy cure. As, however, the process of granulation in this first abscess was completing itself, a

second developed in the deltoid region of the left shoulder; the inflammation here was of the subacute variety, and was treated with alternate applications of antiphlogistic and slightly stimulating medicaments. This inflammation, after a few days, involved the subclavicular region, and extended itself (yet not threateningly) into the axillary space. The matter formed was of course vented immediately on its presence being verified. This second abscess (while in process of cure) was succeeded by a third, developed in the apex of the lung of the same side; and the progress and maturation of this placed the life of the child in the greatest peril, for two days all hope being abandoned.

Recovering from this, still another abscess—in this instance presenting alone primarily the expression of a serous effusion—showed itself in the right parietal region beneath the temporal muscle. In this lesion, the rapidity of the accumulation, together with the entire absence of inflammatory phenomena, inviting examination, the exploring-needle was used, with the result of discovering the effusion to be blood, and not serum, as was inferred. On the sixth day from its commencement, so great was the effusion and so decided its direction towards the zygoma that it became necessary to make an incision. This allowed of a discharge, which consisted of about equal parts of blood and pus.

Happily, throughout the progress of the case the appetite of the child continued, and no difficulty was experienced in the free use of cream and brandy; this stimulant, and Churchill's syrup of the hypo-phosphates of lime and soda, being the only medicinal remedies which it was thought necessary to use. The abscesses terminated with the one in the scalp, and the recovery was so complete that the health of the child at this date seems quite as good as before the attack.

This case was evidently one of multiple thrombic abscess, and in no sense of the word septicæmia. The condition of the system of the little patient during the progress of the abscesses, and the immediate and happy recovery, exhibit, as it would seem, the purely mechanical expression of the different stases.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF R. J. LEVIS, M.D.

Reported by Dr. JOHN B. ROBERTS.

CASE OF MULTIPLE ENCHONDROMA OF THE FINGERS.

THIS boy, eleven years old, presents himself with a remarkable deformity of the left hand, caused by the presence of a large number of cartilaginous tumors connected with the phalanges. The history states that five years ago the affection was first observed on the back of the hand near the knuckles, since which time the tumors have been forming upon the fingers, and continually, though slowly, increasing in bulk.

There is also a large mass upon the humerus at the elbow, and another connected with the ulna, producing partial luxation of the joint, by which complete extension is prevented, but not flexion. The inferior extremity of the ulna, which is somewhat misshapen by excessive curvature along its shaft, is imperfectly developed, so that the bone is too short, and gives the wrist an unusual contour. The largest masses of enchondromatous materials are situated upon the first phalanges of the second, third, and fourth fingers, and also upon the second phalanges of the second and third fingers, while smaller tumors are seen connected with the remaining phalangeal bones. The motion in the

joints is restricted, and in some places there is partial luxation, although the greatest bulk of the tumors, in most places, seems to be upon the shafts of the phalanges. There is some deposit at the distal ends of the metacarpal bones, and, owing to abnormal relaxation, the fingers can be bent backwards until they stand at a right angle with the metacarpus. There is no pain in the tumors, which are benign, and only impair the function of the hand by their bulk, which prevents the free use of the fingers; the boy can grasp large objects quite firmly, but delicate manipulations are impossible.



These tumors, which at a distance resemble osseous nodules, have a peculiar elasticity, and are simply masses of cartilage developed in the cancellated structure of the bones. This enchondromatous material has the character of the cartilage found in foetal life, and may be deposited in various situations,—as in the testicle or in the parotid region, as well as in bone. The disease is quite common in bones, and is one of the most frequent causes of benign tumors seen upon the fingers. Occasionally, but very infrequently, the growths assume a malignant character, and then may be followed by the gravest consequences.

"The diagnosis of enchondroma is almost unmistakable, but errors have been made by supposing such tumors to be tensely-filled cysts, on account of their peculiar elasticity simulating an indistinct fluctuation. This error would be most liable to be made with enchondroma in or about the parotid gland. It should be borne in mind that the hardness of enchondroma, when not ossified, is never so great as that of normal cartilage, such as the costal, tracheal, and laryngeal cartilages.

"The microscopic appearance of the structure of enchondroma shows a remarkable want of uniformity of cell-form and arrangement, and this irregularity is greater than in any other form of benign tumors.

"Enchondroma of the hand seems to be almost invariably associated as to its origin with childhood, or is congenital; and experience shows that the increasing development of the tumors usually ceases at the age of maturity. It has been remarked that the thumb is generally exempt from such growths, even when all the other fingers are affected. Although enchondroma of bone in general varies much as to its exact origin, in the hand the tumors always originate within the bony structure.

"In the ordinary location of such tumors, as on the long bones and the bones of the pelvis, there are many recorded instances of their enormous development. In one case, in which the tumor was developed around the entire shaft of the femur, its circumference was three feet, and the patient was relieved of the increasing burden by a successful amputation at the hip-joint. A cartilaginous tumor, involving the upper part of the tibia of a child, attained a circumference of two feet during a period of but eighteen months; and John Hunter removed an enchondroma, developed from one side of the face, which weighed after extirpation nine pounds."

The affection is not amenable to treatment by medication, and excision of the growths or amputation of the members affected would be altogether improper in this instance; therefore the boy must be content to carry this deformity with him throughout life.

BELLEVUE HOSPITAL MEDICAL COLLEGE.

SERVICE OF PROF. LEWIS A. SAYRE.

Phonographically reported by WILLIAM A. GEORGE, M.D.

POTT'S DISEASE—NEW METHOD OF TREATMENT; FIBROUS ANCHYLOSIS OF HIP; TALIPES—SECTION OF PERONEI MUSCLES; FIBROUS ANCHYLOSIS OF KNEE; INFLAMMATION OF KNEE—LOCALIZED TREATMENT BY ACTUAL CAUTERY; TWO CASES OF CARBUNCLE, ONE FOLLOWED BY ANCHYLOSIS OF FINGERS, THE OTHER, BY NECROSIS OF BONE; SUPPOSED FRACTURE OF NECK OF FEMUR SIMULATING HIP-DISEASE—CHLORIFORM.

THIS child, four years of age, was brought to my office six weeks since, from the country, with Pott's disease, or posterior angular curvature of the last two dorsal and first upper lumbar vertebræ, unable to stand, very much emaciated, and the right limb paralyzed,—probably from pressure upon the spinal cord. The child had suffered the usual symptoms of this disease for more than a year past, having been treated for worms, incontinence, and pain in the stomach, the disease of the spine never having been suspected until a few weeks ago, when the physician who had the child in charge sent him to my office.

The patient's parents were too poor to buy a Taylor's brace which I intended to put upon it, and the disease, in fact, had so far progressed as to require of the child the recumbent position for some time before even a Taylor's brace could be used to advantage. As I before said, they were too poor to buy any mechanical apparatus, and, as perfect quiet of the spinal column was requisite, I had the child held up by the arms (the weight of the body acting as an extending force), pinned his little flannel shirt around his thighs, stretching it over his body smoothly, and, commencing at the pelvis, applied rollers saturated with plaster of Paris to his entire trunk, the same as you would to the thigh in dressing a fracture.

The only fear I had in making this application was of constricting the chest so as to interfere with respiration; but, as the child cried lustily during the whole operation, this fear was removed. He appeared able to press the diaphragm down so as to give plenty of room for respiration, notwithstanding that the dressing was entirely around the thorax.

He was held in this position, suspended by the arms, for twenty or thirty minutes, until the plaster became set. Then the cuirass, as it might properly be called, was divided in the median line from the sternum to the pubis, when, of course, his respiration became perfectly easy. The lower portion around the pubis was then secured by a roller, making it a firm support, and the upper portion of the dressing was tied at various points by an elastic bandage, allowing the upper por-

tion to expand for respiration, and, as his parents say, he has been perfectly comfortable ever since, has grown quite fleshy, and is now able to walk about without resting his hands upon his knees.

This child was brought to me again an hour ago, and I have brought him to you to show the practical effect of the application of this plaster-of-Paris dressing, as it is the first time I have used it in this way. I have frequently employed the plaster extending two-thirds around the body, which I have termed "turtle-shelling," but never before carried it clear around, encircling the entire body. As you all know, the streets are nearly impassable from the small icebergs interspersed here and there, and therefore we have been jolted in the most severe manner, and yet the child has never complained at all, although the parents say that it was impossible to move him before without using the greatest care.

We will remove the cuirass, which is for the first time since I applied it six weeks ago. The angle of the curvature is very much less sharp than when the instrument was applied, and the child's general health has improved immensely. [The professor then showed the plaster cast to the class, the mother holding the child in her lap in the mean time. It was then readjusted, when the mother remarked that the child could now sit up, but when the dressing was off it could not sit up at all,—which, as the professor mentioned, was the best proof of the efficacy of the treatment.]

The advantage of this plan is that it is very simple, very economical, the material for its construction attainable anywhere, its ease of application, the readiness with which it can be readjusted as the growth of the child requires, and the accuracy of the fit, giving the child more comfort than any instrument which could be made, unless over a plaster model, which would be very expensive. The objection to the use of plaster is that it is not very clean; but this can be obviated by using starch, flour, and eggs, silicate of sodium, or any thing else that will assume the shape of the body and retain that form.

When the disease occurs in the cervical region there must be a support for the head. Taylor thinks he obtains this by a support under the chin, resting on the shoulders. This, however, will not answer the purpose, for, if the brace be sufficiently slack for a patient to eat, there certainly can be no extension.

Case II.—This little girl now before you, gentlemen, is the same one that was here two months ago, with an ankylosed hip, with the leg strongly adducted across the opposite limb, and the foot inverted, the deformity being that which results from nature's cure of hip-disease.

To rectify this distortion you will, perhaps, remember that I divided the adductor muscles of the thigh and advised an extension-splint with abducting screw, since which time I have not seen her, in the mean time she having been treated by my son.

Examining her, I find the result has been much better than I at the time of the operation anticipated. Here, when we hold the pelvis still, we obtain motion at the hip-joint, flexion, extension, abduction. This, gentlemen, is a case in which massage would be of great benefit. She has no pain, and by having the limb in a position to enable her to walk, her own exertions will greatly aid in perfecting the motion of the joint.

Case III.—This, gentlemen, is the case which was before us some three weeks since, suffering from double club-foot, equinus in the left, and equino-valgus in the right, the sequel of an attack of diphtheria when one year old, the deformity being of fifteen years' standing. You will remember at that time I cut those tissues upon which point pressure produced reflex contractions,

and by this test we found that in the left foot the plantar fascia, and in the right the tendo Achillis and peronei muscles, required division, it being the first time in my life where I had seen this contracted condition engrafted on a former paralyzed state of the muscles. After the operation he was dressed in my usual way, and went home. To-day he returned for the application of elastic force.

Upon an examination, we find the trivial wounds healed, the feet capable of being brought into a normal position and retained there, and the tendons which were severed firmly united. He as yet has had no electricity or friction to bring out the vitality of these muscles, but you notice he has perfect control of those divided, and you will recollect when I cut these tendons I restored the foot at once to its natural position, and did not wait, as some advise, until the tendons united before attempting restoration of the parts. I always replace the foot in its proper position immediately on section of the tissues.

But suppose, now, gentlemen, I let this lad go without any instrument to retain his feet in place: what would be the result? Why, in a very short time he would be as badly off as before the operation was performed. The proper treatment of talipes does not consist alone in restoring the foot to a normal position, but in retaining it in that position by mechanical means until sufficient vitality has been secured to the parts, by electricity, massage, etc., to hold it there. And the mechanical means which I here use is a shoe having appropriate joints, and to which are attached such artificial muscles (made of rubber) as the weakness of the parts require. He will also need an everting screw to correct the tendency to inversion of the left foot.

Case IV.—This boy, six years old, has suffered for five years from disease of the left knee-joint, and, although he has recovered from the disease itself, it has been with the usual distortion peculiar to these inflammations of the knee-joint, and with limited motion.

He measures as follows: Left limb, thigh, 8 inches; calf, 6½ inches; knee, 9 inches. Right limb, thigh, 10 inches; calf, 7¾ inches; knee, 8 inches. Both the legs are of the same length, so far as I can measure, allowing for the flexion. The flexion in this case is nearly at right angles, and is due to the neglect of passive motion during the progress of the disease.

The treatment consists in the application of the same principle of which I have so frequently spoken to you,—namely, the restoration of vitality to the parts, and the restoration of the parts to their normal position. The adhesions here are not so firm as to require *brisure forcée*, and the prospect is good that by means of an extension-instrument with an appropriate joint he can be perfectly cured of his deformity.

Case V.—This, gentlemen, is the little girl who was here last week, and who gave us the following history, as we learn from the stenographer's notes: "N. M., aged 6, has been ill for two years, complaining of pains in the knee which were thought to be 'growing pains,' and which also were supposed to be due to a fall upon the knee. She suffers from pain principally at night; is on her feet all day. Has been gradually wasting in flesh. The family are all healthy with this exception, and the patient had good health previous to the fall. Examining her, there was found to be little if any effusion, a slight increase in temperature, but no redness. There was no pain upon extension, thus excluding the soft parts from the disease; but, upon pressing the ends of the femur and tibia together, at the same time adducting the leg, the pain was severe, showing at once that the inflammation was limited to the inner portion of the articulation, especially as compression with abduction was negative in its effect. By pressing, now,

with our finger, we find the seat of pain at the top of the tibia, where the coronary ligament holds the semilunar cartilage in place."

The child presents the same condition to-day, and the treatment, as I suggested last week, will be the actual cautery. There is no use of strapping, as there is no effusion to be absorbed. Why the actual cautery is best for these cases I do not know, unless it relieves inflammation by shrivelling up the blood-vessels. [The child was anæsthetized, and the operation performed.]

That, gentlemen, is the way to give chloroform: at least, that is the way I give it: a very few drops sprinkled on a handkerchief, and applied close to the face, without admixture with oxygen. I know this method of using chloroform for the production of anæsthesia is contrary to the teachings of all the books. I am fully aware that it is in direct antagonism to the opinion of many distinguished men; but chloroform given in this manner does the work, and, so far as my experience goes (and I administer chloroform six or eight times daily, in all classes of cases), it does the work speedily and safely.

What do you give chloroform for, except to produce anæsthesia? Oxygen is its antidote, and resists its effects. Then why do you give the antidote, which prevents you from obtaining the influence of the drug, when by giving the vapor of chloroform pure and unimpregnated with oxygen it produces its results at once, and with but the minimum quantity? Then, if by some mishap, some peculiar idiosyncrasy of your patient, respiration ceases, a few artificial respiratory movements are all that is required, and the five or ten drops instead of five or ten ounces which have been used are rapidly eliminated from the system, and the patient is rescued from impending death; but if there be a pound of the agent which has been gradually introduced into the patient's circulation, what hope have you—what hope *can* you have—that success will attend your efforts at restoration?

Chloroform is a deadly poison, as strychnia, arsenic, prussic acid, but who ever heard of their being given by the ounce or pound, in connection with their antidotes, in order to attain their effects? No; the doses of these drugs are carefully gauged, and the very same reason which prompts the physician to regulate the doses of strychnia, arsenic, and prussic acid should deter him from giving chloroform in such large and indefinite quantities.

Now, one point in applying the hot iron. You noticed I held it firmly, very firmly, to the knee. And why? Because an evolution of gas takes place, and unless securely held your instrument will slip from the point, and instead of having a linear eschar at the exact spot desired, as the result of your operation you will obtain a half-dozen bad burns, perhaps exactly where you did not desire them.

There is but little pain attendant upon the operation. From some cause, burning with an iron at white heat is the best local anæsthetic we have, and frequently when the operation has been performed once, and it becomes necessary to repeat it, the patient refuses an anæsthetic.

Cases VI. and VII.—Negress, 35 years old. Two months since, she had a carbuncle on the ulnar side of the palm of the hand, which was allowed to pursue pretty much its own course, and finally healed up, leaving her hand in the ankylosed condition which you here see (fingers clenched and rigid).

In this other case, a blacksmith, you observe a different result. In the case of the negress we have fibrinous ankylosis of the fingers, due to the adhesions of the theca to the tendons, while here we have extensive suppuration, sloughing of the dense palmar cuticle, and exposure of the bone; besides, this case is but of a week's standing. These inflammations beneath the

palmar fascia, known as "frog felons," are of frequent occurrence, are intensely painful, and sometimes lead to disastrous results. Suppuration taking place beneath this dense tissue, there is no place for the easy escape of pus, and consequently it burrows in every direction, producing infinite mischief.

The treatment consists in an early and free incision; and if the inflammation be beneath the periosteum, as it frequently is, it must be laid open as well, otherwise necrosis of the bone will follow.

Of course, the only thing left for us to do in the treatment of the first case is simply to administer an anæsthetic and break up the adhesions, and give the patient instructions to use and work her fingers as much as possible after she goes home.

But in the case of this blacksmith, I fear the ring-finger will have to be removed. When he came to me yesterday, I laid open the parts, but whether in time to save the finger I cannot as yet say. I will extend the incision I made yesterday, but if simple exfoliation of this denuded bone does not take place, the finger had better be removed early. [Both operations were then performed.]

Case VIII.—Here, gentlemen, is a woman, aged 35, with an enlargement upon the upper and outer portion of the left thigh that has a peculiar rounded shape. There are two sinuses here; one over the trochanter major, and the other opening half-way down the thigh, the latter presenting the characteristics, first pointed out by the late Dr. Stevens, of leading to dead bone. I have never yet seen a sinus having the appearance of the cloaca of the hen, that did not communicate with necrosed bone.

This woman states that she has been laid up for three years with this trouble, has been under treatment and has had extension applied, evidently by some one who thought she had hip-disease.

By holding the pelvis still, and pressing with great force against the acetabulum, I produce no pain, and can obtain slight motion without pain; but if we make the motion too extended she suffers, owing, I presume, to the extra-capsular inflammation, and by this means we exclude disease within the joint proper. By the use of a soft, flexible probe like this, as I supposed, here we find necrosis of the femur which does not involve the joint. By inserting the probe at the lower opening it passes upward seven inches, and grates on dead bone near the great trochanter; and by a tortuous course which this flexible probe readily follows, I find this upper sinus communicates with the same necrosed bone.

In the further examination of this case we discover she has the exact position which generally follows fracture of the neck of the femur,—shortening and eversion; but the patient declares that she never had fracture.

We will now put the end of the tape on the tuberosity of the ischium, and, carrying it around to the anterior superior spinous process of the ilium (Nélaton's test), we find the trochanter major above the line, showing that there has been fracture of the neck of the femur, dislocation or else disease of the acetabulum, allowing the head to ascend. But if it had been hip-disease, third stage, there would be inversion of the foot, and not eversion; besides, I have motion in this joint almost too free to admit of there having been hip-disease. It is barely possible that the disease might have progressed, and the limb assumed this peculiar position owing to artificial traction; but my diagnosis is that this is a case of fracture of the neck, which has united, throwing out an enormous amount of callus, imprisoning dead bone, and that this necrosed bone is the cause of the discharge which has been kept up for three years.

In the treatment of this case, I shall simply dilate this lower opening: to make an incision seven inches long in a woman who is run down like this one, is a very serious matter, and by dilating this lower opening with a sponge tent or piece of laminaria, and putting in a drainage-tube, it is very probable that the small portion of dead bone will come out of itself, and by the use of a splint with an abducting and inverting screw we will try to rectify the deformity. Of course she is to have fresh air, good beef-steak, and plenty of exercise, which the use of the splint will enable her to take. By these means, I think, she will get entirely well, with an exceedingly useful limb, as the shortening can be overcome, in a manner, by an extra lift on the heel and sole of her left shoe.

This case, gentlemen, is very interesting, from its simulation of hip-disease, and for which it could readily be, and has been, mistaken.

TRANSLATIONS.

THE VASO-DILATATIVE ACTION OF THE GLOSSO-PHARYNGEAL NERVE ON THE MUCOUS MEMBRANE AT THE BASE OF THE TONGUE.—M. Vulpian presented at a recent meeting of the Académie des Sciences a note on this subject, of which the following is an abstract. Curarized dogs in whom artificial respiration was maintained were used for experiment.

After having exposed the glosso-pharyngeal nerve below the base of the cranium, it was tied, and then cut above the ligature, so that its peripheral extremity could be excited by electricity.

No change in the appearance of that portion of the mucous membrane of the tongue supplied by this nerve, the posterior, from the epiglottis in a V-shaped direction to the calciform papilla, was observed, excepting slight and transitory congestion. An induced current passed through the peripheral portion of the nerve caused redness of the lingual mucous membrane on the same side in the locality mentioned. This red color was particularly intense in the neighborhood of the anterior half-arch, and extended to the tonsil. The inferior surface of the tongue became congested at the same time, but to a less degree. The vessels of the congested parts could be seen to be enlarged, and the temperature of the mucous membrane was somewhat increased, but it was not moist. The effect of faradization lasted some time, and could be renewed at pleasure. These results are the same as those obtained by cutting, on the same side of the same animal, the lingual nerve at its superior part, the hypoglossal and the pneumogastric close to the cranium, after having, in addition, excised the superior cervical ganglion. The same results are observed in an animal poisoned with sulphate of atropia. The mechanism of this vaso-dilating action of the glosso-pharyngeal is undoubtedly the same as that exercised by the fibres of the chorda tympani which accompany the lingual nerve to its extremities.

Further experiment showed that the vaso-dilatative fibres contained in the glosso-pharyngeal are not present in the facial.

Finally, the vessels of the mucous membrane of the tongue are everywhere under the influence of vaso-dilatative fibres. In the anterior part of the tongue it is the lingual which supplies this action by means of anastomotic fibres received from the chorda tympani; in the posterior part of this organ it is the glosso-pharyngeal by which, as has been shown, this office is performed.

JABORANDI.—M. Gubler presented to the Société de Thérapeutique recently two specimens of jaborandi,

one of which had been sent to him by M. Coutinho, the other taken from a lot consigned to a drug house in Paris.

These two specimens resembled each other closely, and seemed to belong to the same species (*Pylocarpus pinnatus*); their action was identical. A patient to whom M. Gubler had administered four grammes of this new jaborandi perspired very freely, and gave about a litre of saliva. The branches seemed to have an action similar to that of the leaves, and nearly as intense.

The administration of jaborandi is appropriate, M. Gubler thinks, under all circumstances, and in any disease. It occasionally produces vomiting, particularly when it is not administered fasting. Other effects are, production of violent thirst, and, occasionally, considerable swelling of the submaxillary glands. Jaborandi is indicated, accorded to M. Gubler, in anasarca and effusions of all kinds, subacute articular rheumatism, bronchitis with asthma (M. Gubler has had remarkable success in preventing attacks of the latter affection), and influenza. It may also be recommended as a substitute for calomel, especially in ophthalmia, when it is desired to induce salivation. X.

A CASE OF CEREBRAL RHEUMATISM TREATED BY COLD BATHS.—M. Blachez communicated the following observation to the Société des Hôpitaux (*Bull. Gén. de Thérap.*, February 28). A woman thirty years of age was attacked by the first symptoms of rheumatism on the 14th of January. On the 16th the rheumatism was fully developed. On the 18th the articular pains disappeared, the fever becoming more intense. On the 19th delirium supervened, the pulse rising to 118. On the 20th, condition worse; violent delirium, pulse 156, temperature 107.2°; the case seemed desperate. After consultation, the first bath, reduced by ice to 78°, was administered. The patient, after remaining immersed for an hour and a half, showed a pulse of 96 and a temperature of 101.1°.

From the 12th to the 24th twelve baths were given, the temperature of these baths ranging from 73.4° to 77°. Under the influence of these a gradual amelioration of the patient's condition was brought about. On the 25th the temperature was 99.3°, and the pulse 96; consciousness returned by degrees. By the 27th the patient was convalescent, and on the 5th of February she went out for the first time. X.

THE LESIONS PRODUCED BY ERYSIPELAS.—Dr. Renault (*Archives Gén. de Méd.*, March, 1875) formulates his ideas upon this subject as follows:

1. The lesions produced in the skin by erysipelas are those of a simple inflammation, a *dermatitis*; the latter characterized by two anatomical periods: (a) infiltration of white blood-globules into the derma, corresponding to inflammatory oedema; (b) proliferation of fixed cellules, less transitory, and which appear to play an important part in the induration consecutive to erysipelas.

2. The infiltration of the white globules into the derm takes place by exudation. The white globules are brought by the lymphatics of the blood-vessels.

3. They are taken up for the greater part by the lymphatics, and when the transportation is very active the latter become inflamed consecutively.

An endolymphangitis, a lymphangitis, or a perilymphangitis may be brought about. The passage of the white blood-globules in the lymphatics occurs in the lymphatic spaces of the skin channelled in the middle of the fasciculæ of connective tissue.

4. In intense erysipelas the adipose tissue becomes inflamed, and returns to the embryonic condition, taking a prominent part in the primitive and consecutive erysipelatous induration. X.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

PROFESSIONAL ADVERTISEMENT.

THE subject of professional advertisement, upon which we have had occasion to speak at various times, seems to be attracting very wide attention at present. We think such attention is extremely necessary in certain quarters, and in no place is it required more urgently than in the neighboring city of New York. If our medical friends there continue as they have done to use increasingly the *Tribune* as their means of communication with the profession, we will have to withdraw our subscription from our old favorite, the *Medical Record*, in favor of its more pretentious rival. We are not surprised, therefore, that the *Record* is discussing the matter with more boldness than formerly. Indeed, one of its recent editorials might have been mistaken for the product of the pen of "an Ishmaelite." The New York societies are certainly to blame in this matter; some of their most prominent members seem to have abundantly and openly transgressed the Code of Ethics, and the *Record* is undoubtedly correct when it says, "The medical man himself is alone responsible for allowing himself to be used as a means of sensationalism in any shape." The following challenge to the societies contains so much that is true and suggestive that we offer no apology for extracting it from the columns of the *Record*:

"Believing it to be our duty to be outspoken in this matter, we, even in this day, when newspaper advertising is timidly winked at by our County Society, dare question the right of any medical man to laud himself at the ex-

pense of his more deserving but less modest confrères. We care not who this man may be, whether a professor, a president of a society, or a leading practitioner, he is always amenable to discipline, and should, when found guilty, always be punished. If punishment cannot be inflicted without the fear of offending, then let us abolish our code of ethics, let the county societies alter their by-laws, and cease their presumptuous censorship of the profession. The Committee on Ethics may take up the case of some obscure individual, who, without influence and without friends, may be forced, in the face of starvation, to get business by unorthodox measures, and may annihilate him by expulsion. But how is it with some prominent men who presume to transgress the code with impunity? We have yet to hear of one who has ever been brought to account."

We fear the only answer which will be given this will be some senseless personal abuse of the editor who penned it; but nothing would better clear the professional atmosphere throughout the country than a thunderstorm in New York. The present tendency to neglect of ethics largely had its origin in that city, and the expulsion of one or two prominent men from the societies would render professional advertisement unfashionable for some time to come.

WE have been asked to call attention to the following circular:

"Some of the descendants of William and Samuel Tuke (the former of whom proposed the establishment of the York Retreat in 1792, and the latter wrote the 'Description' of the humane system of treatment commenced there) having placed at the disposal of the Medico-Psychological Association the sum of one hundred guineas, the Association offers a prize of this amount for

"The best series of original Cases and Commentary, illustrative of the Somatic Ætiology of various Forms of Insanity, accompanied, when possible, in fatal cases, by reports of post-mortem examinations and microscopical preparations,—their bearing on the symptoms being pointed out.

"Cases not seen by the writer may be cited, but must be distinguished from those actually witnessed by himself.

"The W. and S. Tuke Prize is open to all without restriction as to country, profession, etc., but the right is reserved to withhold it should there be no essay of sufficient merit. Essays, to be written in English, and not in the author's handwriting, to be sent with a sealed envelope, bearing the motto of the essay, and containing the name of the writer, to the undersigned, not later than June 30, 1876. The microscopical preparations, but not the essay, to belong to the Association.

"W. RHYS WILLIAMS, M.D.,

"Hon. Sec.

"BETHLEM ROYAL HOSPITAL, LONDON."

CORRESPONDENCE.

SOUTH OIL CITY, PA., March 6, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

ON the 16th of November last I was called to see a boy aged 4 years, who was suffering from strangulated inguinal hernia. After making the usual attempt to reduce by taxis, I resorted to the use of chloroform. Still finding the reduction difficult, I had the lad suspended by the feet, the head hanging down, while I continued my efforts at reduction. After hanging three or four minutes, the chloroform-narcosis was so far overcome that I thought it necessary to administer more of the anæsthetic. For this purpose he was placed on his back, when, almost instantly, he became insensible, and, although I continued my manipulations of the hernia, continued so till I again ordered him to be suspended as before, when in a very few minutes—I should say three or four—he again aroused, and cried out. As the hernia was yielding, I retained him in position till it was returned, when I placed him on his back, and he immediately became unconscious, and went into a profound sleep, which lasted some fifteen minutes. I report this case as confirmatory of the theory of Nélaton, that chloroform-narcosis causes an anæmic condition of the brain and spinal cord.

Yours truly,

F. F. DAVIS.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, FEBRUARY 11, 1875.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

Aneurism of the aorta, with supposed rupture of the heart.

DR. JOHN GUITERAS presented the specimen, and read the following history:

"As the nature of the case was not suspected during life, the history I have been able to obtain from the attending surgeon, and the notes on the autopsy, are necessarily very imperfect.

"H. M., æt. 40, admitted into the medical wards of Blockley Hospital on the 4th of November, 1874. No careful examination was made of his condition; and, as he had a sore on the face, he was transferred the next day to the surgical ward. Here he was treated for syphilitic necrosis of the nasal bones. Besides this, he rather frequently called for relief in attacks of bronchitis, which soon yielded to treatment, and never made necessary a physical examination. Nevertheless, the man was weak, and indisposed to move. He was short of breath, and kept a good deal to his bed. To get a good night's sleep he required anodynes, and preferred to lie with the shoulders elevated.

"On the 13th of January he felt better than usual, and did not take his evening dose of morphia. At 11 o'clock the night-nurse heard him blowing as if to spit up something. A few minutes after, the doctor found him tossing about in the bed, and gasping for breath. He was able to utter short, interrupted sentences. The skin was purple, cold, and clammy. No pulse could

be felt, except, perhaps, at the carotids. Though the movements of the patient prevented all attempts at auscultation, the condition was diagnosed as one of heart-failure, and was treated accordingly. At 1 o'clock A.M. he died in a condition of syncope. The urine removed before death was not albuminous.

"Autopsy.—The cartilage-knife was made use of to cut the costal cartilages over the heart. In removing the sternum, a piece of the pericardium, about two inches in diameter, was shaved off; a considerable amount of blood ran out, and a clot was seen bulging through the opening. This clot filled up the pericardial sac, was half an inch thick, measured six by five inches, and weighed eight and a quarter ounces. It was recent, as shown by its dark color and jelly-like consistency. On removing it, a small projection from it appeared to be entangled in the cardiac walls. On grasping the vessels at the root of the neck, blood was seen to well out of a small slit in the anterior wall of the left ventricle. When the thoracic viscera were removed, it was found that the arch of the aorta was dilated into a large aneurism, the upper wall of which was left in the body.

"I saw the specimen a few days after its removal, and was led to doubt the existence of cardiac rupture. Examining it carefully, I find that the heart is enlarged. The deposit of fat around it is abundant, especially about the right ventricle. Less than one inch from its origin, a large dilatation of the aorta begins, and extends somewhat beyond the origin of the left subclavian. It might hold a large orange. Its outer surface is very ragged; the inner surface is covered with irregular layers of fibrin, which have broken down in some places, leaving the sac-walls very thin. On its anterior wall, in the ascending portion of the arch, there is a place where the thrombus is deeply excavated, and at the bottom of this excavation the adventitia seems to have been perforated. On filling this portion with water, the liquid leaks, drop by drop, through the opening.

"The left ventricle is moderately dilated and hypertrophied, its walls measuring half an inch. The right ventricle is not dilated, and its walls measure from one-sixth to one-eighth of an inch. Just to the left of the inter-ventricular septum, and one and a half inches from the apex, the slit is found. It is directed downwards and outwards, and measures less than half an inch. Its edges are perfectly smooth, very much resembling an incision. The upper end runs straight into the cavity, whilst the lower end runs slanting to meet the upper one; thus leaving a very small opening on the endocardial surface, so small that it was only detected by pushing a director from the outside.

"The valves are slightly thickened, but the endocardium in the cavities and at the seat of puncture is perfectly healthy. There is no lesion of the cardiac walls about the opening. The muscular fibres present the usual slight fatty degeneration common to all cases of hypertrophy with dilatation.

"In regard to the slight attachment of a portion of the clot to the viscus, it must be remembered that it did not lead to the discovery of the opening, but it was brought to mind after the slit had been found.

"The following reasons seem to disprove the existence of rupture of the heart:

"1. The presence of an aneurism of the arch of the aorta, a lesion which is so apt to terminate by rupture into the pericardium. The walls of the sac are very poorly organized, and at one spot an opening seems to have occurred during life.

"2. The pericardium, endocardium, and the muscle itself present no acute or chronic lesion that could have caused a rupture. The deposit of fat around the heart is not more than what I have seen in a good many cases.

"3. The features of the slit. It is a perfectly clean cut. The upper end leads perpendicularly down into the cavity of the ventricle, whilst the lower end slopes gradually almost to meet the upper one; thus representing the shape of the blade of a knife. Experimentally, I used the knife in cutting the costal cartilages of another subject, without being careful to avoid the heart, and I produced a slit similar in every respect to the one in our specimen.

"4. I also think that I found the trace of the knife in the clot; but this had been handled a good deal.

"The perforation was rendered particularly easy in this case by the clot of blood distending the pericardium, and by the layer of fat covering the anterior surface of the viscus; both circumstances tending to diminish the resiliency of the structures to the knife."

Dr. JAMES TYSON said he had seen the specimen immediately after its removal from the body of the patient. At that time a probe had been introduced through the opening of supposed rupture, but he was at once impressed with the resemblance of the orifice to that produced by a knife, such as often occurs when opening the chest rapidly. He was informed, on remarking upon this resemblance, that the orifice, when discovered, was covered by a huge clot of blood which appeared to render such an origin impossible. Dr. T. had no doubt that the orifice was produced by the knife in the post-mortem examination, and that the clot was probably due to a rupture of the aneurismal sac.

Obscure growths in the liver.

Dr. A. C. W. BEECHER presented, for Dr. J. C. NORRIS, the specimen, derived from C. L. J., aged 60 years, American, strictly temperate; had had no serious ailment prior to the sickness from which he died; never had venereal disease; no intermittent fever; no dysentery; no hæmatemesis; no dropsy. He was a confectioner until eight years ago, since when he had not been engaged in any business. His family for several generations was healthy; no history of cancer, consumption, or syphilis. The last sickness was of sixteen weeks' duration; he was deeply jaundiced after the first week. He was costive during the first six weeks, after which his bowels were moved daily without medicine, the stools being clay-colored from the first, and continued so until death.

There was no pain at any time in any of the abdominal organs, and no enlargement. Urine passed in normal quantity and deeply colored. He expectorated large quantities of frothy matter, occasionally colored with blood. He suffered from a great irritation of the skin, compelling him to scratch all night unless under the influence of anodynes.

The above history was given to Dr. Beecher by Dr. J. C. Norris, at whose request Dr. B. made the post-mortem examination, assisted by Dr. Isaac E. Roberts.

Post-mortem examination.—Skin deeply jaundiced, body somewhat emaciated, abdomen rather scaphoid.

The *abdominal viscera* were all deeply tinged with bilious coloring-matter; otherwise healthy, except the liver, which, though normal in size, had a hard mass of tissue at its transverse fissure, and surrounding the vessels entering there. There were a few hard nodules in the longitudinal fissure, and these were very small. The vessels entering the liver were markedly encroached upon in their calibre, the portal vein and hepatic artery being reduced to about one-eighth of an inch in diameter. The gall-bladder was not distended, and upon pressure there exuded a transparent straw-colored or yellow fluid of syrupy consistence. Upon plunging a scalpel into the substance of the liver, a fluid similar in character to that from the gall-bladder poured out: it was not so thick, however. The quantity amounted to several ounces. This fluid seemed to

come from the dilated hepatic ducts, which were very much enlarged; in the hepatic duct, just before it entered the cystic duct, there was a dilatation equal in size to a shell-bark. Though there was apparently no obstruction of the common bile-duct or of the cystic duct, yet the fluid in the liver did not exude under slight pressure.

The heart was small, but healthy; the lungs healthy, but some old pleuritic adhesions on the right side. No abnormal effusions in any of the cavities either of chest or abdomen. Kidneys healthy, but stained with bile.

Dr. S. W. GROSS asked whether the growths had developed from the secreting tissue of the liver or in the connective tissue about the transverse fissure.

Dr. R. M. BERTOLET, to whom the specimen had been referred for microscopical examination, said he had not had time to make a satisfactory examination. The sections he had removed contained nothing beyond connective tissue and fat-globules, further division of the growths being deferred until it had been exhibited. The tumor, when he first saw it, was about as large as a shell-bark, had surrounded the portal vein, and produced evident constriction. The matters contained in the gall-bladder and biliary ducts were biliary, and gave the usual reaction of the bile-pigments. If it should be scirrhus, it is certainly a very unusual site for it. There are, on the other hand, many clinical facts against it. In the first place, primary cancer of the liver is exceedingly rare; three-fourths of all cancers of the liver are secondary, and of these two-thirds are metastatic to primary growths in the visceral area of the portal circulation. Further, it has some suspicious appearances which suggest a gummy tumor, which, although usually occurring in multiple form, is sometimes isolated.

Dr. GROSS said his reason for asking the question lay in the fact that all the specimens of carcinoma of the liver he had seen had been developed in the substance of the liver, and not in the connective tissue, while it is well known that it is claimed that cancer is never developed in connective tissue, but only in glandular structures.

The PRESIDENT said that the specimen was one of great clinical rarity, whatever the nature of the growth might be. In carcinoma of the liver, masses of varying size are frequently seen developed from the glands or connective tissue in the transverse fissure of the liver, without actually involving the hepatic structure. The walls of the gall-ducts or bladder, or less frequently of the blood-vessels, may either become involved in the disease, or may be compressed so as more or less to obstruct the lumen. Nearly always in such cases there has been disease of other portions of the liver-structure associated; and he could not remember more than a very few instances where carcinomatous growths had appeared limited exclusively to the tissues in the transverse fissure of the liver. If this specimen be of malignant nature, therefore, it certainly should be regarded as of unusual interest.

Dr. BERTOLET said the latter question was answered by the fact that secondary cancers of the liver often could be clearly traced to cancerous thrombi in the vessels of the organ, the infecting mass being developed in and spreading from these thrombi. Virchow has even seen a thrombus of the portal vein undergo complete carcinomatous degeneration when there had been as yet no extension to the surrounding tissues. Naunyn goes so far as to say that all secondary cancers of the liver originate as cancerous degenerations of the thrombi,—that the majority of carcinomas of the liver start out from branches of the portal vein; but, as this growth lies outside and not within the lumen of the vessel, such a thrombic source is excluded.

Dr. B. stated that he had recently had the opportunity of studying several fine specimens of secondary hepatic cancer, and had noted that a peripheral or portal invasion of the acini seemed to be the rule, and that all attempts to inject the portal vein had signally failed.

The specimen was referred to the Committee on Morbid Growths, which reported as follows:

"The hepatic growth presented by Dr. Beecher consists of a dense whitish cicatricial tissue, in which are imbedded irregularly-shaped, yellowish, cheesy masses. The great preponderance of the gray fibrous tissue gives the growth a dense, scirrhous-like consistence. Bands of connective tissue permeate the growth in every direction, and, extending along the portal vein for a considerable distance beyond the point of constriction, render its walls thick and inelastic.

"Microscopically, the large nodule attached to the portal vein is made up of the fibrous tissue already mentioned, granular hyperplastic cells, and oil-globules. The central portions of the growth are in a more advanced stage of fatty and cheesy metamorphosis.

"There can be little doubt that we have here to deal with a mass of sclerotic tissue, the condensation and retraction of which have led to the partial stenosis of one of the branches of the portal vein and the occlusion of the adjacent biliary ducts; so that the latter can be readily traced to the surface of the organ, where they at times are dilated to the size of a crow's quill.

"No traces of a lymph or glandular structure could be discovered in any part of the growth. Whether the hyperplastic mass was irregularly called forth by syphilis or some other irritant the clinical history of the case perhaps may disclose, but, until the contrary is proved, your committee are inclined to regard it as a *gummata*."

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

FEBRUARY 1, 1875.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

DR. J. CHESTON MORRIS, Chairman of the Committee appointed to examine optically the one-twenty-fifth and one-fiftieth objectives displayed at the late Exhibition of the Section, made a report, which was referred to a committee, and of which the following is an abstract:

The lenses submitted for examination were a one-sixth, one-tenth, and one-fiftieth made by Tolles, all immersion, a one-twenty-fifth immersion by Wales, and a one-fiftieth, dry, made by Powell and Lealand. The points which we considered it requisite for us to examine were, 1st, flatness and clearness of field; 2d, definition; 3d, penetration; 4th, resolution; 5th, angle of aperture; 6th, achromatism; 7th, amplification; 8th, working focus. Penetration or depth is the property by which a lens shows us with tolerable distinctness objects or structures lying just within or beyond the best focal point or plane, and is of the greatest importance in tissue-investigations. [As a method for testing penetration (hitherto a desideratum), Dr. Morris proposes to examine a cover ground so as to be one one-hundredth of an inch thinner on one edge than its opposite, and to measure with an eye-piece micrometer the breadth of the band of ground glass distinctly visible (flatness of field being presupposed).] Again, resolving power is the property of showing certain lines, markings, or shadows on diatoms, etc., and may or may not co-exist with best defining power: it depends in great measure upon angle of aperture, and is to a great extent an antagonistic property to penetration. The dependence of resolving power upon angle of aperture is very

well shown by placing a *Pleurosigma angulatum*, for instance, under a one-fourth or one-tenth, with such an eye-piece as will amplify sufficiently, and putting the compound body horizontally in front of a direct light. In this position no lines will be seen, but by rotating the compound body on its axis an oblique light is obtained, which at different angles, according to the power of the objective, will bring out transverse or oblique lines, and finally dots appearing as hexagons. The following results were thus obtained:

POWER EMPLOYED.	TRANSVERSE LINES.	OBLIQUE LINES.	HEXAGONS.	TOTAL OBSCURATION.	ANGLE OF APERTURE.
Spencer's one-half inch, C eye-piece (lines beginning to show at 25°).....	25°			36°	60°
" one-fourth inch, C eye-piece.....	20°	25°		60°	120°
" one-eighth ".....		0°	40°	65°	130°
Tolles's one-tenth immersion (lines broken into dots).....		8°	20°	85°	170°
Wales's one-twenty-fifth, immersion.....			0°	70°	140°
Powell & Lealand's one-fiftieth, dry.....	15°	20°	63°	126°	
Tolles's one-fiftieth, immersion.....			0°	70°	140°

We found that the one-fiftieth of Tolles gave good results as to flatness and clearness of field, penetration, resolution, amplification, and working focus or distance. Its definition is only fair, as also its working angle of aperture, while as to achromatism there is much improvement to be desired, and in working focus and general usefulness much might be gained by setting the front lens less deeply and reducing the brass work of the face. We were, however, agreeably surprised by the facility with which it can be handled.

The one-fiftieth of Powell and Lealand was not equal to the above in clearness of field nor in definition nor in working focus. Its penetration was equal, as also was its amplification, but its angle of aperture was 14° less.

The one-twenty-fifth of Wales is a very superior lens, giving good definition, resolution, and penetration, whilst its other qualities are very fair.

The one-tenth of Tolles, although constructed mainly for use with oblique light, showed itself a good lens, with direct central rays, as to flatness and clearness of field, definition, amplification, and resolution; its angle of aperture is wonderful, while its achromatism and even its penetration are very fair, and its working focus sufficient.

From the observations noted above we deduce one very important fact, viz.: That the different appearances of lines, dots, hexagons, etc., on *Pleurosigma angulatum* are not only the varied results of angle of aperture, of amplification, and of illumination, but that they may be obtained with less and less obliquity of light as we increase the power of the objective; thus making it evident that high powers with direct central light show us clearly things which we rather guessed at than saw (owing to the increased chance of spherical and chromatic aberration and distortion from the employment of oblique light) with lower ones.

We would conclude, therefore, by recommending these high-power lenses to those engaged in microscopic research, not as capable of doing all work,—a one-inch is as indispensable to a histologist as a one-fourth,—but as likely to be proportionately useful in unravelling the mysteries of organic life.

DR. J. GIBBONS HUNT desired it to be distinctly understood that he had nothing to do with the preparation of the report, and did not wish to be held responsible as a member of the committee for the views advanced in it. He considered that it embodied the obsolete views of Carpenter and Beale in regard to penetration, which term should be dropped from the vocabulary of microscopists. He believed that penetration and resolution

can be and have been combined in the best objectives.

Dr. J. CHESTON MORRIS stated that the report was based upon a careful and conscientious examination of the objectives by the committee, and was in accordance with the well-known laws of reflection and refraction of light. He had submitted the report to Prof. George F. Barker (of the University of Pennsylvania), who had approved it so far as the optical questions were concerned, except, perhaps, on the subject of penetration, which he attributed to imperfect spherical correction. He could have wished that Dr. Hunt had expressed his dissent from the document as freely in private, when it was shown to him, as he had just done. All he did at that time was to suggest some slight alterations and additions, which being made, Dr. Morris was led to expect his adhesion to the report. As to the question of penetration being a useless one, he considered the presence of this quality in the lenses of Tolles of great moment. High angle of aperture and penetration have not been combined in the objectives of the German, English, and French makers to the same degree.

Dr. HUNT said that what one man calls penetration another does not, terms often being used without an exact knowledge of the meaning intended to be conveyed by them. He preferred a lens that will give one absolute focus rather than three indistinct ones. The conditions of testing are frequently fallacious, and imperfect illumination is one of the most prolific sources of error. With low objectives, as, for example, a one-fifth, used with the amplifier, very satisfactory and reliable results can be obtained.

In conclusion, Dr. HUNT proposed that at some time during the next year any resident member or members of the Section should prepare one dozen microscopical preparations, extemporaneous or otherwise, representing that many different departments of microscopical work, and exhibit the same at a meeting or meetings of the Section, under his own apparatus and in his own way, the object being to test men in regard to their technological skill, he offering to do the same. Those competent may compare and judge the results.

On motion of Dr. MORRIS, it was resolved that the Curator be authorized to purchase for the Section a Nobert's test-plate.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

CONVERSATIONAL meeting, Wednesday, January 27, 1875, at the Hall of the College of Physicians.

Dr. WILLIAM GOODELL, PRESIDENT, in the chair.

Dr. J. C. MORRIS read a paper on the "Use of Alcohol in the Treatment of Disease."

Dr. G. HAMILTON remarked that the numbers adduced by the lecturer were too small to admit any positive conclusions in regard to the comparative success of the moderate or immoderate use of stimulus in the treatment of typhoid fever. Other causes might operate. Long ago, in the hospitals of Paris, the disease had varied in its fatality during a series of years from one death in three, to one in twenty cases, under the same treatment and with similar surroundings.

The late Dr. William Gebhard, eight or ten years before his death, had said to him that typhoid fever had become so modified that he no longer regarded it as a very fatal disease.

Dr. ESHLEMAN said that in the experiments on Alexis St. Martin alcohol arrested digestion in the stomach. He does not hesitate to use it in typhoid fever, although he thought it was less used now than during the war.

The PRESIDENT stated that in the administration of

stimulants he was governed pretty much by one rule. When there is a craving of the system for alcohol, a few minutes after the patient has swallowed it his breath gives no indication of its presence. But when it is not needed, or when contra-indicated, his breath becomes loaded with its fumes. Apart from other positive clinical deductions, this peculiar tolerance of alcohol in certain stages of disease is in itself a strong argument for its value as a therapeutic agent.

Dr. ALLIS asked the lecturer the best mode of administering stimulants when the patient is almost bloodless, or suffering from shock.

Dr. MORRIS said he had assisted in some experiments upon St. Martin: Dr. Eshleman's statement was correct, but he thought quantity and habit had something to do in his case. Dr. M. said the object in cases of shock, such as referred to by Dr. Allis, was to arouse the powers. The pulse is small, thready, and life is at a low ebb. Put mustard on the stomach and brandy in it, the impression is immediately felt, and reaction sets in.

Dr. ATLEE said he had no experience in the use of alcohol. He had always dreaded it, and, in typhoid fever, gets along without it.

Dr. HAMILTON said in reference to the condition alluded to by Dr. Allis, characterized by repeated vomiting, rapid and feeble pulse, that the same thing was often seen in obstetrical practice, when excessive hemorrhage had completely exhausted the patient, and was probably dependent upon the exsanguineous condition of the brain and spinal marrow, and, as a sequence, deranged correlation of the entire nervous system.

Dr. LEE asked the experience of the lecturer of the use of alcohol in disease.

Dr. MORRIS said he had not seen any specific action. It is a tonic to the stomach, and may thus be used gradually with benefit, but he has seen tubercle develop during alcoholism. He believes in the contagiousness of tubercle. Some individuals are more susceptible than others, from constitutional predisposition.

Dr. STETLER asked Dr. Morris how he advised stimulants to be administered in such persons as our old friend Timothy, who are obliged to take them for their "stomachs' sake." In these cases Dr. S. thought they ought to be given after meals, and greatly diluted. If given too concentrated, they would rather retard than promote digestion. St. Martin's digestion was, he believed, good, and if whisky retarded it, as remarked by Dr. E., he probably took it in a too concentrated form. Dr. S. referred to the very successful treatment of typhoid fever at the Pennsylvania Hospital about twenty years ago (while he was a student there), when stimulants were given *pro re nata*.

The late Dr. Gebhard stated that he had treated seventy-five cases consecutively (some in private practice) without having lost more than one, and that one was a woman who came in with a tubercular complication, of which she died, and not of typhoid fever.

Dr. MORRIS said he was accustomed to give wine whey on the eighth or ninth day, so as to bring the pulse down to ninety, and keep the pulse round and full; afterwards milk-punch (1 to 5 of milk) once in four hours or oftener, so as to produce this effect. In enfeebled digestion he gives ale, sherry, hock, etc., at meals. In a concentrated form alcohol coagulates albumen, retards digestion, and produces chronic gastritis.

DEATH FROM THE USE OF PERCHLORIDE OF IRON.—A foreign cotemporary records a fatal instance of the use of a uterine injection of perchloride of iron. Peritonitis supervened soon after administration, and death occurred in thirty hours.—*Lancet*.

GLEANINGS FROM OUR EXCHANGES.

VALUE OF QUININE IN SCIATIC NEURALGIA.—Dr. D. I. Mackenzie (*Lancet*, March 6) had under his care a woman in whom sciatic neuralgia became developed, subsequent to injury received in a fall, by which the left thigh beneath the gluteal fold had been severely bruised. Three weeks after the accident the patient was seen by Dr. M., who ordered opium externally and internally, with hot turpentine fomentations. After two days a mixture containing ten grains each of iodide and bromide of potassium was ordered, and this treatment was continued for two or three days with some relief. At the end of that time it was observed that the disease had assumed a decidedly intermittent character, coming on in excruciating paroxysms at night. The bromide and iodide were then suspended, and quinine was given, thirty grains in divided doses on each of the first two days, the effects being carefully watched. On the third day the amount was diminished to fifteen grains. The large doses caused great deafness and noise in the ears, but the improvement was well marked. During the next few days quinine was administered only when the neuralgic symptoms were urgent; and on the 5th, for the first time, the patient got out of bed for a little. On the 7th, as the paroxysmal pain had given place to a constant aching, the iodide and bromide were resumed, but the quinine was again found to be necessary. From that date until the 19th, quinine was given nearly every night in ten-grain doses, and blisters, which were found very useful, were occasionally applied over the painful parts. During that time the symptoms were such as to leave no doubt of the efficacy of quinine. The pain began every morning about one o'clock; but if the patient was asleep it was not sufficient to awaken her until between two and three. If taken at ten P.M., the quinine did not entirely prevent the paroxysm. If taken at one A.M., it prevented it entirely. If the dose was not taken until three, the patient suffered for about half an hour after taking it, and then fell asleep. In consequence of the experience thus gained, the ten-grain dose of quinine was latterly left every night at the bedside for her to take when she felt the pain come on.

The improvement continued up to date of report, with every prospect of entire recovery.

PHOSPHIDE OF ZINC.—At a recent meeting of the Obstetrical Society (*Lancet*, February 27) Mr. J. Ashburton Thompson communicated a short paper exemplifying the advantage of employing phosphide of zinc in the treatment of chlorosis and anæmia. It succeeded in relieving the symptoms where iron had failed, and that rapidly. Phosphorus was of great value in the treatment of patients recovering from uterine hemorrhage, and in all cases of anæmia, and seemed to exercise a specific influence upon the neuralgia so often met with in these cases, encouraging the general nutrition of the body. Free phosphorus is not the treacherous poison it has hitherto been considered to be. It is a fatal and potent poison, it is true, but its therapeutic effects may be obtained with precision and perfect safety. If proper formula be employed, no apprehension of unexpected or uncontrollable poisonous effects of a therapeutic dose need hinder its general employment.

Dr. Routh said it might be known to some members of the Society that he had made several inquiries on the employment of phosphorus. In some cases it produced marvels, especially in cases, like those detailed by Mr. Thompson, due to deficiency of phosphorus in the system. But it occasionally acted injuriously, by producing headache and giddiness; and in a few cases (of idiosyncrasy perhaps) it acted as a deadly poison,

even in the first dose, sometimes immediately producing vomiting and syncope. The safest preparation was the phosphide of zinc; but it was a medicine always to be closely watched when given.

Dr. Tilt inquired what preparation of phosphorus Mr. Thompson recommended.

Mr. Thompson, in reply, said Dr. Routh had revived the old objection, not because it was a poison, but because we cannot calculate the results. These arose from decomposed phosphorus.

Dr. Playfair inquired whether the zinc phosphide was not insoluble in pill.

Mr. Thompson replied that some acid tonic given simultaneously would serve to assist in the decomposition.

SALICYLIC ACID.—The *Boston Medical and Surgical Journal*, March 11, contains an abstract of a letter received by Prof. Horsford from Kolbe, of Leipsic, in which the latter gives various details of interest relative to the use of this product. In the lying-in hospital of Leipsic it seems to have superseded carbolic acid as a disinfectant for the hands, vaginal douching, application to ulcers puerperalia, etc. It is used in solution in water of one part in three hundred to one part in nine hundred, or as a powder mixed with starch in proportion of one part in five. Kolbe recommends the trial of this remedy internally in the various zymotic diseases, in pyæmia, bites of dogs, etc. In order to prove its innocuousness he administered to himself and a number of students various doses of the acid, up to twenty-three grains a day. The following is recommended by Wunderlich as a convenient formula for its administration:

R Acidi salicylici, gr. xvi;
Ol. amygdalæ dulc., f3vj;
Acaciæ gummi, ʒiii;
Syrupi amygdalæ, f3viiss;
Aq. aurantii flor., ad f3iv.—M.

Salicylic acid is very little if at all absorbed through the skin.

ENORMOUS HYDROCELE SITUATED IN THE ABDOMEN CAUSED BY UNDESCENDED TESTICLE.—The following case is related in the *Lancet* for February 13: A man 28 years of age was admitted into the British Infirmary on account of a large prominent tumor measuring eight inches by eight inches, lying in the left side of the abdomen. The skin and external oblique muscles were in front, but it was evident that the mass of the abdominal parietes passed behind the tumor. Fluctuation of the consistence of serum was felt in all the tumor, save a solid portion at the lower part measuring two inches by two inches. The patient's history showed that his left testicle had never descended, but lay in the inguinal canal. Six years ago, having to walk a great deal, he began to feel pain in this testicle, which soon began to swell and attained a large size. Soft swelling of the parts above set in, and soon prevented him from walking, and gave him much pain. The tumor, therefore, was a hydrocele of the testicle. After drawing off the fluid with a trocar, a seton was introduced, the object being to set up free inflammation in the sac. The cavity became in due time contracted, but the testicle continued enlarged, and, in order to reduce this, liniment of iodide of potassium was applied, and the iodide given internally with favorable results.

AN UNUSUAL RESULT OF SEPTIC POISONING.—Under this title Dr. W. S. Bigelow (*Boston Medical and Surgical Journal*, March 11) gives notes of ten cases of a peculiar disease recently observed among newly-born children in the Boston Lying-in Hospital. The characteristic features were, discoloration of the skin, diphtheritic inflammation of some of the mucous surfaces

(in one case thrombo-phlebitis), hæmaturia, dark-green fetid dejections. Together with these symptoms there was found an alteration of the blood, consisting in—1, excess of white corpuscles; 2, alterations of red corpuscles; 3, the existence of granules. Accumulations of the amorphous material of the red corpuscles in the renal tubercles, with clots in some cases in the ureters and bladder. Accumulations of spores: 1, in the renal tubes, with extension outside their walls; 2, in the larynx, and possibly on the other surfaces affected by the diphtheritic process.

The process is generally endemic. The local accumulation of spores appears to be in close relation to the phenomena of the disease.

DIVISION OF POSTERIOR TIBIAL ARTERY TREATED BY COMPRESSION.—Dr. Edwardes Kerr reports the following case (*Lancet*, March 6): J. F., aged 50, a hay-trusser, was returning home from work with his large hay-trussing knife and three-pronged fork (weighing together about six pounds) slung over his shoulder upon the end of a stick. The strap by which they were attached to the stick gave way, and the point of the knife fell upon the right ankle, which was hindermost in the act of walking. Not knowing what mischief had occurred, he continued walking until he fainted, when his assistant, who was with him, thinking he had swooned from loss of blood, applied a strap firmly round the leg below the knee, and got him home as best he could. The patient was first seen by Dr. K. an hour later. Finding it utterly impracticable under all the circumstances to attempt to secure the artery (which spurted so soon as the strap was removed), he applied a graduated compress directly over and above the wound, put the patient to bed, and left him for the night. The bandage and compress was kept on for twenty-one days, and the patient in bed. At the end of the eighth day a small hole was made in the bandage for the exit of any matter which formed, and beyond that it was left entirely alone. On the twenty-first day Dr. K. removed everything, and found a wound three inches long, extending obliquely downwards and forwards below the inner malleolus, with a healthy granulating surface. No pulsation could be detected below the wound, and there was no hemorrhage from the day of the accident. The patient came down-stairs on the twenty-second day, and walked about his house with the aid of a stick, and, beyond feeling weak from loss of blood, complained of nothing.

PROLAPSE OF THE URETHRA SIMULATING PROLAPSUS UTERI.—The subject of this observation was a woman 55 years of age, who, after a prolonged walk, became sensible of the presence of a tumor between the labia of the vulva. Dr. Chamono, being called in, found, on examination, a tumor the size of a nut, having an opening in its centre, and presenting an almost perfect resemblance to the neck of the uterus in a multipara.

This tumor, which presented at the vulvar opening, had a certain consistence, and was sensitive to pressure; it could be replaced in the vagina, but immediately prolapsed when pressure was removed. Dr. C. thought at first that he had a case of prolapsus uteri to deal with, but on practising the vaginal touch he became aware that the cervix uteri occupied its normal position, and that he had a prolapse of the inflamed urethral mucous membrane under examination. Reduction was at first impossible; but rest in bed, with the use of astringents, finally enabled the operation to be performed successfully.—*Gaz. Méd. de Paris*, March 13; from *Anfiteatro Anatómico*.

A SOCIETY for the abolition of vivisection has been started in London: it is probably brother or sister to the Anti-vaccination League.

MISCELLANY.

CHEAP.—The Northern Ontario Medical Association is composed of men who are willing to work cheaply. So at least we infer from the following copy of the tariff of fees adopted by the Association, which we take from the *Canada Lancet*. Let us hope that rents and marketing are cheaper in Northern Ontario than they are in Philadelphia.

MEDICINE.

For Medical Advice in office, with or without medicine	From \$0.50 to \$1.50
" Visits in the Villages during the day	1.00
" " " " night	2.00
" " into the Country, one mile or less	1.00
" " " " each mile after the first	0.50
" " " " by night, one mile or less	2.00
" " " " per mile	0.75
" Consultation Visits, an extra fee of From \$1.00 to 2.00	
" Medical Certificates of any kind (mileage as above)	5.00
" Unusual detention, every hour after the first, by day	0.50
" Unusual detention, every hour after the first, by night	0.75

OBSTETRICS.

For ordinary cases, each (no complimentary visits after)	\$5.00
If more than five miles distant, mileage as above also to be charged.	
For instrumental cases, or those seriously complicated, as with Hemorrhage, Convulsions, etc.	10.00
Detention over six hours, per hour, in addition to above	0.50
Accounts to be furnished every three months.	

THE AMERICAN REVIVALISTS IN LONDON.—The London *Lancet*, in an editorial on the "Psychology of Revivals," writes as follows: "Emotion is the motive power on which, for the most part, our religious leaders have relied to stir men's minds, to effect what is termed, with more or less justice, their conversion. To effect this, much force is needed, and in those whose minds are in a condition of unstable equilibrium, the resulting perturbation is sufficient to disturb the normal balance of thought and feeling, and start a series of consequences which may result in pronounced insanity. That this is a frequent occurrence may be doubted. Religious delusions are common enough in the insane, but that probably arises from that region of thought and feeling presenting the most unobstructed field for excessive action.

"It is in periods of 'revivals,' when religious emotion is stirred in disproportionate degree, that the danger of such results is greatest; and this aspect of a movement so extensive as that now commenced in London comes fairly within the range of the physician's consideration. Judging, however, from personal observation, we should say that no movement of its extent could well present less danger of excessive or perverted emotional effects than that of Messrs. Moody and Sankey.

The testimony of most unprejudiced observers is to the same effect. The services are singularly free from the more objectionable elements of 'revival' meetings. Sympathetic but not overwrought music, and shrewd, rough aptness, sometimes humor, of the sermon, are the characteristics which mark the services from most ordinary preaching of the same theological school; and there is nothing to point to artificial stimulation of the emotions more than necessarily attends extempore worship and earnest preaching in a large concourse."

ORNAMENTAL PRESERVATION OF THE DEAD.—Some one writes to the editor of the *Lancet*, suggesting for the consideration of those interested in the question of interment the use of glass cases, tubular in form (the shape used for growing cucumbers); the smaller end of the tube completely closed, into which tube the body would be passed first, and then hermetically sealed above and beyond the head. The body, thus converted into a "vitreous mummy," might be retained in the house for a longer time, while friends would have the opportunity of viewing the body without detecting any offensive odor. These glass coffins might be made as handsome as any one desired. The wealthy could have them made colored and cut, like Bohemian vases; while for the poor the coarse stout glass used for skylights would not be much more expensive than wood lined with flannel, etc.

TRIAL OF A SURGEON FOR MANSLAUGHTER.—A surgeon named Peacock was recently tried at the Warwick Assizes for causing the death of a woman whom he attended in her confinement, by cutting away many feet of intestine which protruded through a rent in the vagina.

The sentence of the court was mitigated by the fact that the poor woman would in any case have died.

After an hour's deliberation, the jury returned a verdict of guilty, with a strong recommendation to mercy. Lord Coleridge said he entirely concurred with the finding, but, as there was an absence of all aggravating circumstances, the sentence would be six months' imprisonment without hard labor.

A HOMŒOPATHIC NOVEL.—An anonymous English author has endeavored to seduce the unwary reader into a consideration of homœopathic principles by presenting these in the framework of a very slight novel. The plot is said to turn upon the rejection of a hapless swain by his innamorata, on account of his having "gone over" to homœopathy. The work abounds in arguments between the unscrupulous advocates of regular practice and the chivalrous adherents of the "new views," in which the latter are, of course, invariably triumphant. The hero performs wonderful cures in all directions, and finally wins the fair. As a literary effort, the work may be said to be a "high dilution."

ABUSE OF TOBACCO IN AMERICA.—The average number of cigars smoked in the United States during each twenty-four hours is 5,168,000. The tobacco-users paid

through importers \$6,150,060.41 gold to the government last year in the shape of import duties, and \$33,242,875.62 through manufacturers, on account of taxes.—*Medical Press and Circular*.

AN official return gives 1,295,529 kilogrammes as the amount of horse-flesh consumed in Paris during 1874. There are now fifty horse-flesh butchers in Paris itself, and five in the Banlieue.—*Medical Press and Circular*.

THE number of the *British Medical Journal* for March 20 contains a paper by Elizabeth Garrett Anderson, M.D.

DR. VON LUSCHKA, the famous anatomist, died on the 1st of March last.

THE death of Baroness Schuhaj, a noble Hungarian lady, at the age of 118, is announced.

NOTES AND QUERIES.

OBITUARY.

DEATH OF D. FRANCIS CONDIE, M.D.—Died, at his residence at Morton, Delaware County, Dr. D. Francis Condie, on March 31, in the eightieth year of his age. Dr. Condie was born in Philadelphia on the 12th of May, 1796, and was for many years one of our most prominent practitioners. He was also very widely and favorably known throughout the United States through his medical writings, especially by his work on the "Diseases of Children," which, at the time of its appearance, was one of the best, if not the best, in the language. The principal of his literary labors are the following: "An Abridgment of Thomas's Practice," 1817; "Course of Examination for Medical Students," 1824; "Catechism of Health," 1831; "Treatise on Epidemic Cholera," in conjunction with Dr. John Bell, 1832; "Diseases of Children," fourth edition, 8vo, 1854. Dr. Condie edited Dr. Fleetwood Churchill's works on the "Theory and Practice of Midwifery," and "Diseases of Women," and he made frequent and valuable contributions to the *American Cyclopædia of Practical Medicine and Surgery*; the *Philadelphia Journal of the Medical and Physical Sciences*; *North American Medical and Surgical Journal*; *Journal of Health*, Philadelphia; *American Journal of Medical Sciences*; *Transactions of the College of Physicians*, of Philadelphia; and to the *North American Medico-Chirurgical Review*.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

AN aged and weighty lady has a fatty dilated heart, associated with valvular disease. I found her the other night in a state of collapse; no pulse, face blue, countenance shrunken, cold sweat, etc., etc. One inhalation of amyl nitrite restored her. It probably acted by unloading her heart in opening wider avenues for her blood.

MARCH 29, 1875.

Yours, etc.,

A. K. MINICH.

PENNSYLVANIA ASSOCIATION OF DENTAL SURGEONS.

DR. JAMES E. GARRETSON will by invitation deliver a lecture before the Pennsylvania Association of Dental Surgeons on the evening of April 13, at the Pennsylvania Dental College, Tenth and Arch Streets. Subject, "Who and what is Man?" An invitation is extended to the members of the medical profession.

OFFICIAL LIST.

MEMORANDUM.

No changes in the stations and duties of officers of the Medical Department U.S. Army for the week ending April 5, 1875.

SATURDAY, APRIL 17, 1875.

ORIGINAL COMMUNICATIONS.

THE PHYSIOLOGICAL ACTION OF HEMLOCK AND ITS ALKALOID.

BY B. F. LAUTENBACH, M.D.

IN the following paper, an abstract of a prize essay for the degree of Doctor of Medicine in the University of Pennsylvania (the entire essay the author hopes to have shortly published in a different form), there will be presented conclusions based on a study of the papers of former investigators on conium, and on a careful analysis of one hundred and forty-eight experiments made by the writer.

Notwithstanding the labors of Kölliker, Guttman, Verigo, Harley, Pelvette and Martin-Damourette, the present state of our knowledge respecting the physiological action of conium may be summed up in the words of one who was one of the most eminent of modern therapeutists. About sixteen years ago, Pereira (*Elem. Mat. Med.*, vol. ii.) wrote, "In the present state of uncertainty with respect to the real physiological operation of hemlock, it is obviously impossible to lay down indications or contra-indications for its use, which can be much relied upon."

As conia represents the entire active principle of hemlock, I shall confine my remarks almost exclusively to it.

In man, the chief symptom produced when the alkaloid is given in doses just sufficient to impress the system decidedly, is great muscular weakness, accompanied by giddiness, and occasionally by disorder of vision. There is an intense desire to lie quiet in a semi-horizontal position, and, owing to the heaviness of the eyelids which now occurs, the eyes are half closed, thus giving rise to the impression that the person is asleep. On attempting to walk, his feet feel as though they did not belong to him, and he falls, his knees refusing him support. The pulse is at first increased and afterwards decreased in frequency. Sooner or later, as the drug impresses the system, the pupils dilate. In some persons these symptoms are accompanied, rarely preceded, by symptoms of gastro-intestinal irritation, nausea, and, rarely, vomiting. If the dose be a poisonous one, we have, in addition to these symptoms, total failure of voluntary movements and convulsions occurring (*vide* a case of poisoning by hemlock leaves reported by Dr. Bennett, *Edinburgh Medical and Surgical Journal*, 1845).

Physiological effects on vegetables.—Experiments by Marcet (*Ann. Chem. et Phys.*, xxix. 21, 9), Schübler and Zeller (*Schweiger's Journ. f. d. Chem.*, Bd. i. S. 54), and by the writer, have placed it beyond a doubt that the alcoholic extract of conium acts injuriously on plants; but, as in several other experiments the writer ascertained that the alkaloid conia, instead of acting injuriously on plants, really preserves them from decay, the poisonous effects of the hemlock extract must be due to impurities,

and not to the exceedingly small amount of conia present.

Local action.—A study of the local action of the drug shows that it causes a progressive loss of functional power in every highly-organized tissue with which it comes in contact. Nerve-centres, peripheral nerves, muscles, both striated and non-striated, all succumb to it alike. If such contact be not continued too long, the tissue may recover even after a total suppression of its functions,—a proof that the alkaloid exerts no destructive caustic influence upon the tissues, such as Van Praag (*Reil's Journ. f. Pharmacodynamik*, Heft i. S. 33) claims. Excluding the burning pain and the anæsthesia which follow it, the writer has never observed any action on the tongue, even if the alkaloid was placed on this most sensitive organ undiluted.

Action on the brain.—Conium is not a hypnotic, though it may possibly cause the brain to become slightly clouded, but not to the extent to produce unconsciousness. In inducing complete repose of the muscular system, conia powerfully predisposes the brain for sleep,—brings sleep within its reach, so to speak, but there leaves it. If the imagination should happen to be dull, the brain may accept the invitation, and sleep occur.

Convulsions were early mentioned as symptoms of poisoning by hemlock; but the cause of these convulsions had never been determined. Christison (*Trans. Roy. Soc. Ed.*, xiii. p. 383) imagined them to be due to a depressing action on the spinal marrow, while Damourette and Pelvette (*Gaz. Méd. de Paris*, 37, 1870) attributed them to excitation of the cord.

Convulsions can be produced by a drug in but five different ways: first, they may be muscular; second, they may be due to irritation of the periphery of the efferent nerves; third, they may be caused by irritation of the peripheral ends of the afferent nerves; fourth, they may be spinal; fifth, they may be cerebral.

That the convulsions of conia-poisoning are not due to irritation of the peripheral motor or sensory nerves, nor to any action on the muscles, was determined, first, by tying the abdominal aorta of various animals previous to injecting the conia, when, notwithstanding the cutting off of the poison from the posterior portions of the body, convulsions occurred uniformly over the whole body; secondly, by injecting conia into the amputated leg of a cat, when not the slightest evidence of spasm was observable.

That the convulsions are cerebral, and not spinal, was determined by the result of a number of experiments in which the spinal cord was cut previous to injecting the conia, when it was found that convulsions occurred in those portions of the body whose nerves were still in communication with the brain, but failed to occur in those portions of the body whose nervous communication with the brain had been destroyed.

Action on the spinal cord.—To determine this action of the drug, the writer made thirty-four experiments, two of which will now be given in full.

Exp. XVII.—On a large frog. Tied all the blood-vessels of the left posterior extremity, carefully excluding the nerves. The weakest current that would cause reflex movements in the injured limb was then determined.

3.58.—Injected one-eighth drop of conia.

3.59.—Acetic acid applied; causes no reflex movements in ligatured limb (previous to the injection it caused movements in one second).

4.01.—It takes the strongest current to produce reflex movements in the ligatured limb.

Exp. XVIII.—Tied all the blood-vessels of the left posterior extremities of a large frog, and then determined the weakest current which would cause reflex movements in the ligatured limb.

4.15.—Injected one-eighth drop of conia.

4.16½.—A much stronger current is required to produce reflex movements in the ligatured limb.

4.20.—The strongest current applied to the ligatured limb will not cause reflex movements.

As the ligatured limbs in these experiments failed to respond to irritants when the access of the drug to the trunks and periphery of the nerves was prevented, this failure must have been due to paresis of the spinal marrow, and not to any direct action on the afferent or efferent nerves. It is therefore proven that there is a steadily progressive stage of spinal depression, with no preceding stage of spinal excitement.

Action on the peripheral efferent nerves.—To discuss this subject is really to discuss what has long been considered, and beyond a doubt is, the chief symptom of conia-poisoning, namely, paralysis. Christison (*loc. cit.*), Reuling and Saltzer (*Deuts. Klin.*, 1853, No. 40), and Van Praag (*loc. cit.*) attribute the paralysis to the action on the spinal cord; while Albers (*Deuts. Klin.*, 1853, No. 34) believes that the paralysis was cerebral.

The first investigator who threw any real light on the subject was Kölliker (*Virchow's Archiv*, Bd. x. S. 228). In 1856 this distinguished investigator announced that the failure of motion in conia-poisoning is due to a direct action upon the periphery of the efferent or motor nerves. He first experimentally determined that in frogs killed by conia the application of the galvanic current to a nerve fails to induce contractions in the tributary muscles. He then cut off the supply of blood to the hind extremities, and found that after voluntary motion had ceased anteriorly, and even after galvanic irritation of the anterior nerves had lost its influence upon the muscles directly supplied by these nerves, irritation of the same anterior nerves caused reflex contractions in the hind legs, thus showing that the anterior afferent nerves and the spinal cord still retained functional activity after the loss of it in all those efferent nerves reached by the poison. He then extended his experiments by severing in a frog all the tissues at the upper part of the thigh, except the nerve, and found that when an animal so prepared was poisoned by conia, after the paralysis was complete in all the extremities to which the poison had access,—after stimulation of the poisoned nerves failed to excite contraction in the tributary muscles,—the leg which had been protected from the action of conia responded not

only to irritation applied to its nerve, but also to stimuli placed upon distant portions of the body. After repeating these experiments several times, he drew the conclusion previously given.

His results have been confirmed by Guttman (Reil, *Mat. Med. d. Chem. Pflanzenstoffe*), by Verigo (*Deuts. Zeitschrift f. Arzneikunde*, xxviii. 2, 1870), and by the writer in a large number of experiments. They have been denied by Dyce-Brown and Davidson (*Med. Times and Gaz.*, July, 1870), they basing their denial on two experiments in which they obtained results directly opposing those of the other experimenters; but their experiments can be readily explained by an anomalous distribution of the iliac arteries which frequently is seen in lower animals.

Recently, upon the foundation of a simple, crude, and inconclusive experiment, Harley (Old Vegetable Neurotics, p. 11) has readvanced the opinion formerly held by Albers, that conia affects chiefly the corpora striata and the other centres at the base of the brain supposed to mediate between the will and the spinal cord; he attempts on this supposition to explain the paralysis. After studying his experiments and conclusions most thoroughly, one cannot help wondering at the fact of so eminent a physiologist and therapist drawing such an unwarrantable conclusion.

After studying the papers of the preceding investigators, it will be seen that the cause of the paralysis is still somewhat undecided. Paralysis can be produced by a drug in four different ways: first, it may be cerebral; second, it may be due to spinal paralysis; third, it may be due to direct action on the muscles; fourth, it may be due to paralysis of the peripheral ends of the efferent nerves.

That the paralysis of conia-poisoning is not muscular is proved by the circumstance that muscles taken from animals completely paralyzed by conia—paralyzed to such an extent that galvanic irritation through the nerves fails to excite contractions—can be made to contract most energetically when the galvanic current is applied directly to the muscles.

In fifty-one experiments made by the writer on dogs, cats, mice, and frogs, the main blood-vessels supplying one or both posterior extremities were tied before injecting conia, and in all but two of these experiments the limbs protected from the drug's action were not paralyzed until just before the occurrence of death, thus proving that the paralysis must have been peripheral. Had it been cerebral or spinal, the paralysis would have occurred uniformly over the whole body, notwithstanding the ligature of the blood-vessels. The same action was demonstrated when conia and strychnia were injected simultaneously into the abdomen of frogs from whose posterior extremities the direct access of the poison had been cut off. By their conjoint action there was produced a commingling of paralysis in all other parts of the body, with violent tetanic spasms in the protected limbs. This commingling would have been impossible if the paralysis were due to any action on the spinal cord or on the brain, and it can be explained only on the supposition

that conia paralyzes all the motor nerves with which it comes in contact.

Two experiments on young cats gave very exceptional results, which the writer is unable to explain except on the supposition that conia has a double action on the motor nervous system,—a paralyzing action on the peripheral ends of the efferent nerves, and a depressing action on the spinal motor tract. In almost all cases the former occurs first and predominates, the spinal paralysis not occurring until the period of death; yet in a few instances the former does not occur, while the latter becomes more marked.

Action on the peripheral afferent nerves.—Except the loss of irritability of the eyes, the sensory nervous system has always been supposed to remain unaffected. In some of the earlier experiments evidences were seen which threw doubt on this supposition, but later, when a number of experiments were made especially to determine this point, these doubts became certainties. These experiments proved that not only is sensation impaired, but that this impairment is due to paresis of the periphery of the afferent nerves.

In opposition to these conclusions could be cited all investigators on conia since the time of Christison; but, as I have yet to find the first paper in which efforts have been made to prove that loss of sensation does not occur, little importance can be attached to such assertions.

Action on the circulatory system—pulse.—In ordinary therapeutic doses, conia causes an increase in the number of heart-beats, which is followed by a decrease to the original number of pulsations. In poisonous and even in very full therapeutic doses the subsequent decrease is much greater than the primary increase. As no increase in the number of heart-beats occurred when the pneumogastrics were cut previous to giving the conia, the primary increase must have been due to paresis or paralysis of the pneumogastric centres. The subsequent diminution in the number of pulsations can be best explained by the occurrence of paresis of the vaso-motor nerves, due to commencing paralysis of the spinal cord.

Arterial pressure.—Conia causes the column of mercury in the cardiometer to be decidedly lowered at first, but very soon the mercury rises to far above its original height.

Action on the respiratory system.—The first effect of a poisonous dose of conia is to cause an increase in the number of respiratory movements; this is followed by a diminution, and ultimately, if the dose be sufficiently large, by their complete cessation. As the primary acceleration does not occur when both vagi have previously been divided, the acceleration must be due to an action on the pneumogastrics.

The failure in the respiratory movements advancing *pari passu* with the paresis of the voluntary muscle—general paralysis and the cessation of all respiratory movements occurring at the same time—renders it very probable that the diminution in the respiratory movements is due to the same cause as the paresis of the voluntary muscles.

Gastro-intestinal action.—In ordinary medicinal

doses no gastro-intestinal symptoms occur in man; in some experiments made by the writer, grain doses did not produce the slightest nausea, or even anorexia. In dogs, who vomit readily, this symptom almost always occurred, even if the drug was given hypodermically, proving that the gastro-intestinal irritation is not due to any local action on the alimentary canal, but that it is due to a specific action on the gastro-intestinal apparatus.

These symptoms are not exclusively canine, as attempts at vomiting are recorded by Bennett (*loc. cit.*) in a case of fatal poisoning by hemlock-leaves; and Schroff (*Vierteljahrschr. f. Praktische Heilkunde*, 1855), in his experiments on the human subject, records one case in which vomiting occurred.

Action on the glandular system.—One of the first effects of a large dose of conia, in about one-half of the experiments, was to increase the secretion of the salivary glands. As this increase occurred when conia was injected into a vein or into the peritoneum, it cannot be due to any local action, but must be due to stimulation of the chorda tympani and other nerves concerned in the secretion of saliva.

Conia has no influence on the quantity or quality of the urine, nor has it any influence on the function of the skin. Its action on the biliary secretion has not yet been determined, but the circumstance that after death from conia-poisoning the gall-bladder is always found distended with bile, renders it probable that it increases the flow of bile.

Action on the muscular system.—The voluntary muscles escape unscathed in conia-poisoning, they continuing to respond to galvanism for a considerable period after death. The contractility of the muscles, however, may be destroyed by soaking in a concentrated solution of the alkaloid; but before such an effect can be produced in life the animal will have perished.

On the non-striated muscular fibres the action of the drug is more pronounced. Geiger (*Mag. f. Phar.*, Bd. xxxv. S. 72, 256) states that it produces irritation of the muscular fibres of the diaphragm and alimentary canal, while in the experiments made by the writer, contractions of the muscular fibres of the intestinal canal and bladder occurred.

Action on the pupil.—Dr. Hoppe (*Die Nervenwirkung d. Heilmittel*, Leipzig, Hft. 1) made a number of experiments to determine this action of the drug, and, in conclusion, says that in the beginning the pupil is contracted, but later it becomes very much dilated. His conclusion has been confirmed by Pelvette and Damourette (*loc. cit.*), who attribute the contraction to "augmentation of the excitability of the spinal cord;" but, as the contraction occurs only when conia is locally applied to the eye, it must be due to irritation, and to no general action whatsoever. The dilatation which is always produced when conia is absorbed is due to the paresis of the peripheral extremities of the motor oculi nerves no longer enabling the sphincter of the iris to counteract the radiating fibres supplied by the more slowly paralyzing sympathetic nerve.

Action on the temperature.—All investigators of conia have thus far almost totally ignored this action of the drug, and, so far as I am aware, until this

investigation no one has ever imagined that conia was so peculiar in its action as to be one of three drugs that decidedly increase the temperature of the animals poisoned. This increase occurs not only from poisonous doses, but also when ordinary therapeutic doses are given: *e.g.*, in the human subject one-seventh of a grain of conia caused the temperature to rise from 97° to $99\frac{1}{2}^{\circ}$. This increase in temperature lasts from three-fourths of an hour to an hour and a half, when the temperature gradually becomes normal.

Action on the sexual organs.—The genital depression attributed to conium by the ancients, modern investigators have been unable to discover. The ancients believed that not only did it repress sexual desire, but that it actually caused an atrophy of the testes and mammæ, which latter of course implies atrophy of the ovaries also. The utter falsity of this belief was shown in several cases of chorea occurring in girls about the age of puberty, in whom menstruation came on while they were under the physiological effects of conia.

While conia has no effect on natural sexual desire, morbid states are said to be much influenced by it. In proof of this Dr. Harley (*loc. cit.*) writes, "In those states of exhaustion and irritability which arise from self-abuse, and in those cases of erotic tendency that arise from some obscure irritation of the lumbar portion of the cord, I have never known conium to fail to give relief." This relief is better explained, however, by referring it to the depressant action which the drug has on the spinal cord than to any possible action on the sexual organs.

Absorption and elimination.—That conia is absorbed is beyond question, as it has been found by Orfila in the spleen, kidneys, and lungs of poisoned animals. The drug probably undergoes no change in the system, although Harley says it does because he failed to find it in the urine of an animal poisoned by hemlock; yet it is eliminated by the kidneys, in whose secretion Zaliski and Draggendorf found abundance of it in the first twelve hours of the poisoning, and traces of it for two days and a half.

That it is not necessary for conia to be changed in the system in order to produce the most marked action—that on the periphery of the efferent nerves—was proved by the following experiment:

Exp. LXXVIII.—Cut off both hind legs of a cat just killed with chloroform; both sciatic nerves respond equally to galvanism. Into the left femoral artery a one-grain solution of conia, while into the right an equal quantity of water, was injected. In thirty seconds the application of the galvanic current to the left sciatic nerve causes no response, while its application to the right sciatic causes contractions in its tributary muscles.

MURIATED TINCTURE OF IRON A CURE FOR NASAL POLYPI.

WITH A CASE.

BY GEORGE TROUP MAXWELL, M.D.,

New Castle, Delaware.

I DESIRE to recall the attention of the profession to an efficient mode of treating nasal polypi, which has not received the favor that, in my

opinion, it is entitled to, and which has, therefore, suffered unmerited neglect.

Without intending or desiring to exaggerate the danger, pain, and loss of blood caused by the operation almost universally practised for the removal of nasal polypi, namely, evulsion,—for I know that they are usually inconsiderable,—I nevertheless confidently assert that it has terrors for the subjects of the malady, and that many who are thus afflicted are deterred thereby from obtaining desired relief. Therefore, in this fact—that it presents itself in a less "questionable shape" to the instincts of a patient—is a potent reason in favor of the treatment of nasal polypi with muriated tincture of iron; and when its efficiency as a *radical cure* is guaranteed "the argument is exhausted," almost.

If it be true, as I believe, that nasal polypi (and here I desire to say that my experience is limited to the common or gelatinoid variety) can be removed by the use of muriated tincture of iron, *certainly and expeditiously*, there is an additional strong reason for its employment; which is, that the tendency to repullulation of the polyps can be thus effectually checked, and their reproduction prevented. All surgeons know, and all writers upon the subject admit, the frequency with which such growths are reproduced, after evulsion; but by occasionally inspecting the nares, successive polyps can be easily aborted upon their earliest appearance, by the application of the iron tincture.

The cure of nasal polypi by the employment of muriated tincture of iron was recommended first by Dr. J. H. Reeder, of Lacon, Illinois, who reported two successful cases in the *Chicago Medical Journal* for September, 1859. In 1867 I published a short article corroborative of Dr. Reeder's statements and experience, in the *St. Louis Medical Reporter*, in which the details of three successful cases were given. That article was reprinted in Paris. So far as my information extends, these papers comprise the whole literature of this subject. The profession did not derive from them a full appreciation of the importance of the subject, and, in consequence, a valuable suggestion has been permitted to languish from neglect.

That too little interest in the matter has been awakened is to be inferred from the fact that, in his "System of Surgery," Prof. Gross simply mentions Dr. Reeder's suggestion, and speaks of the mode of treatment—which he had not tried—as a "waste of time;" and, also, because Dr. J. Solis Cohen, in his admirable "Lectures on the Surgery of the Nares, etc.," published in this journal in 1873, neglects to make any reference to the subject. To a letter which I addressed to Dr. Cohen, subsequently to the publication of those lectures, he replied that he had never used the tincture of iron for the cure of nasal polypi, but would give it a trial.

But now to the case:

T. D., carpenter, aged 56 years, came to me to be treated for nasal polypi on the 26th of November last. His general health was good, but he had not breathed through his nostrils, or perceived odors, for over thirty years. The nares were completely closed and impacted

with gelatinoid polypi, which always produced a feeling of discomfort, and sometimes considerable pain. The distention was at times very great, and caused some disfiguration. He had used blood-root and a number of other astringents without effect, but had never been able to summon the courage required to submit to the operation of evulsion. I injected about a drachm of the tincture of iron, reduced in strength one-half by admixture with water, into each nostril, holding his head back so as to retain the fluid in contact with the polyp a few seconds. This simple operation was repeated daily, and on the third day the masses began to slough and to be discharged. At the end of a week their destruction seemed to be complete; the nares were pervious, and the sense of smell was recovered.

The treatment of this case was more protracted than any I had before encountered, three or four days being sufficient hitherto. The delay in this case I attribute to the impacted condition of the nostrils, which prevented access of the tincture to any but a limited portion of the body of the polyp. As soon as the fluid gains access to the pedicle, the cure is rapid, because the death of the polyp is quickly effected. In this case the injection was repeated the third or fourth time before the fluid could pass through the posterior nares into the pharynx. The irritation of the nares caused by the dilute tincture is trifling in severity, and of short duration. Mr. D. discharged the duties of his vocation, without interruption, whilst the treatment of his case was in progress.

AN ADDENDUM TO AN ARTICLE ON AN "OBJECTIVE NOISE IN THE EAR," ETC.

BY CHARLES H. BURNETT, M.D.

IN No. 172, current volume of the *Philadelphia Medical Times*, I presented an account of an objective noise in the ear of a Japanese. As the patient expressed little or no desire to be relieved of the noise, I had an opportunity of watching any other phenomena connected with this singular case.

On February 6, the patient informed me that since he had visited me last, a few days previous, a perforation had occurred in the membrana tympani of the ear in which the snappings had been heard, and that the peculiar noises had nearly ceased.

I found, indeed, a perfectly well-defined dry perforation in the antero-superior quadrant of the membrana tympani where I had previously observed the spasmodic retraction of the membrane, but there was no explanation of the perforation so far as I could discern, and the patient could furnish no solution of its occurrence.

The snappings had become nearly inaudible and very infrequent, and in a few days entirely disappeared. Although a little discharge ensued in about a week after the perforation, probably from the exposure of the mucous lining of the tympanic cavity to the winter atmosphere, it was easily checked, and the membrana tympani closed. Since then there has been no return of the snapping noise, nor any spasmodic motion in the velum palati, Eustachian tube, middle ear, or membrana tympani.

The natural history of this case is suggestive of a possible treatment in similar cases, when the noises occurring in an ear with intact membrane cause such a degree of annoyance to the patient that some effort towards relief is demanded of the surgeon. I would therefore venture to suggest that it might be well to perforate artificially the membrana tympani in such a case, for we have seen that almost immediate relief was given by a natural perforation of the membrana tympani in the Japanese case.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINIC OF DR. R. J. LEVIS.

Reported by JOHN B. ROBERTS, M.D.

EXCISION OF A LARGE VASCULAR TUMOR OF THE FACE IN A CHILD.

A MALE child, aged two and a half years, presents an immense tumor, involving the entire cheek and lower lip upon the right side, and projecting into the cavity of the mouth. At his birth it was the size of a hen's egg, but by continuously increasing it has now attained a great bulk, forming a pendulous mass, extending backward from the middle of the lip, and bulging about four inches forwards. The inferior maxilla has become deformed, and the teeth displaced, by the pressure and dragging of the tumor; and it projects so much into the cavity of the mouth that it is almost impossible for the patient to put the teeth of the two jaws in contact, and he has therefore been obliged to subsist almost exclusively on a fluid diet.



The tumor is painless, soft to the touch, its surface purplish in color; and the slightest scratch upon it is followed by copious hemorrhage, from the recurrence of which the child has at several times almost perished.

All these points render the diagnosis clear, and prove the tumor to be a nævoid growth, or hypertrophied condition of the capillary vessels, which must be removed if the patient is to have any chance for his life, since it is rapidly growing, and the occurrence of uncontrollable hemorrhage may cause his death at any time.

Nævoid tumors are usually congenital, and their most common site is upon the head and face, though they may occur anywhere, since they are pathologically merely a hypertrophy of the capillary arteries and veins; in some cases the arterial, in others the venous element predominating. They may increase in size

until they, as in the present instance, attain an enormous bulk; they are also temporarily enlarged and made more turgid by crying or any exertion on the part of the patient which increases the intravascular blood-pressure.

The location of vascular tumors is generally in the subcutaneous connective tissue or the skin, so that they are entirely covered by healthy integument, or, as is more frequently the case, the vessels of the skin are blended with the tumor, and an appearance of vascularity is evident, especially at the most prominent part of the tumor. These tumors becoming ulcerated, hemorrhage may supervene, which, if profuse, may jeopardize the life of the patient. In some cases when they have been allowed to remain until adult life in females, they have been the seat of vicarious hemorrhage at each catamenial period.

In this case the tumor is probably, like most nævoid developments of childhood, a mass of tortuous veins, which are varicose and cavernous. The term aneurism by anastomosis has been applied to nævoid tumors, but especially to those with a decided predominance of the arterial element, and in which pulsation, synchronous with the heart, is often evident.

Vascular tumors when superficial can scarcely be confounded with other growths, for the pulsation, the more or less complete emptying under pressure, and the increase in size during excitement or when held downward so that the blood gravitates into them, are sufficiently characteristic. When located in the deeper structures, however, the evidences may be masked and very obscure, so that a positive diagnosis may be exceedingly difficult.

The usual treatment is to transfix the nævus with pins, around which a ligature is wrapped, and the growth thereby strangulated and allowed to slough; or excision may be practised in order to remove the angioma, which method, however, is generally accompanied by a good deal of bleeding. In this case the size of the mass renders it inadvisable to attempt strangulation, and therefore it shall be excised, after hemorrhage has been guarded against by thrusting a number of long acupressure-needles through the tissues around its base, so as to cut off the entire blood-supply. It would hardly be possible to extirpate the mass by keeping the knife entirely in the surrounding healthy tissue, and if the least portion of the angioma remain it would bleed profusely from the cut surface. Hence it is better to apply acupressure at the base of the tumor to all the afferent vessels before commencing the operation of excision. The first long acupressure-pin is entered at the angle of the jaw, and pushed forward along the bone, to control the facial artery, which has been dragged somewhat out of position; the coronary is next compressed in a similar manner; and so a half-dozen long pins are thrust through, thus circumscribing the base of the tumor, and overlapping each other somewhat, in order to guard every point. Strong cords are then wrapped around the needles, including the base of the tumor, to render it still more safe, since the child, enfeebled by previous hemorrhages from the surface of the growth, can ill afford to lose any blood during the operation.

The knife is now carried around within the line of the circumscribing pins, and the mass, consisting of a network of hypertrophied vessels, removed. The tumor now looks quite collapsed and shrunken, for the blood has all flowed out of the spongy mass. There will be no attempt made to draw the edges of the large, gaping wound together, and of course the acupressure-needles shall remain for a day, or longer, unless there be appearance of sphacelation caused by them. The dressing shall consist of the carbolyzed oil so much used in this hospital. * * * * *

The patient, after having continued for almost a week

in a favorable condition, began to show signs of exhaustion, probably due to the imperfect manner in which he had been for a long time fed on merely weak fluid nourishment. He finally became unable to take proper and sufficient food, and soon died, exhausted.

TRANSLATIONS.

SEROUS OVARIAN CYSTS.—At a recent meeting of the *Académie de Médecine*, Dr. Panas read a paper on this subject. His conclusions are as follows:

1. Among the cysts called ovarian, there is a class of unilocular cysts containing a special fluid, the treatment of which is as simple as it is certain in its results.

2. The characters of the cystic fluid are: complete absence of viscosity; perfect diaphaneity (with occasional exceptions); poverty in proteinous material (modified albumen); and its relative richness in alkaline salts, principally chloride of sodium. Slightly or not at all precipitated by heat and nitric acid, the liquid in question is precipitated by alcohol. In this respect this fluid bears a certain analogy to that found in the spermatocysts of men, as we may be convinced by comparison of the two fluids.

3. We are at present ignorant as to whether the point of origin of these cysts is actually in the ovary or is not rather in the *parovarium* (body of Rosenmüller).

4. The treatment of these cysts is still more simple than that suggested by Boinet, who proposed puncture by means of a trocar, followed by injection of iodine. A simple puncture by the trocar is sufficient to bring about a cure, by removing the fluid completely or even partially.

5. By this process not only is all danger avoided, but even the slightest pain to the patient. In a word, the treatment of these cysts is easier than that of simple or spermatocysts in men, which requires, almost always, the subsequent employment of caustic or strongly irritating injections.—*Le Mouvement Médical*, March 13. X.

COMPARATIVE VALUE OF CARBOLIC AND SALICYLIC ACIDS IN DIABETES.—Ebstein and Müller continue (*Berliner Klin. Wochen.*, No. 5, 1875) their researches upon the action of carbolic acid in diabetes mellitus, and add some observations upon the use of salicylic acid in the same disease. They believe that in certain cases of this disease carbolic acid diminishes the proportion of sugar in the urine, together with the various other diabetic symptoms. These cases are probably those which are connected with obesity, and where an anti-diabetic diet is apt to do good.

Carbolic acid is particularly useful in the lighter cases,—those in which the Carlsbad cure does so much good. It does not, however, any more than the latter, protect against relapses; and, indeed, it fails in some cases when this does well.

Salicylic acid seems to be quite powerless for good in diabetes mellitus; although it is less disagreeable to take, yet many patients actually prefer carbolic acid. The latter may be administered in doses of one centigramme or more. It rarely disagrees; in one case occasional burning pain in the œsophagus was noticed. It in no way disturbs the stomach. X.

VICES OF CONFORMATION IN THE ANUS.—Dr. Delens communicates the two following cases to the *Bulletin Gén. de Thérap.*, March 13: In September, 1874, he was called to see a little boy, four years of age, in whom two anal openings were made out, situated on either side of the median line, and separated by a cutaneous band; only the right was perforated, and communi-

cated with the rectum. The median septum was excised, and the two ani united into one. This abnormal conformation gave rise to no inconvenience in defecation. The second case was that of an infant, not forty-eight hours old, and who presented an imperforation of the rectum; the anus was well formed exteriorly. The operation was immediately performed; in order to get at the bottom of the cul-de-sac more easily, resection of the coccyx was performed. At present this little patient, who is six months old, has a prolapse of the rectum. Perhaps this prolapse is due to the resection of the osseous appendage. It should be noted that the infant lived under very unfavorable conditions.

X.

EPILEPTIFORM ATTACKS FOLLOWING PARAPHIMOSIS (*Wien. Med. Presse*, March 7).—Dr. Moritz Werthur reports the case of a healthy boy, 15 years of age, in whom a severe paraphimosis had been brought about, in all probability, by attempts at onanism. When first seen, the swelling of the parts would not allow manual reduction. After the administration of an anæsthetic, a slight incision was made to relieve tension in the œdematous tissue, and the paraphimosis was reduced. A dressing of cold-water cloths was used, together with a bit of charpie moistened with dilute solution of carbolic acid placed between the prepuce and the glans. The parts recovered their natural condition within three days, but at the end of that time the patient was seized with frequent and severe epileptic convulsions. Suspecting psychical causes, since nothing could be observed to account for the trouble so far as the lately-affected parts were concerned, Dr. W. made use of the oxide of zinc in repeated doses, in connection also with diminishing amounts of morphia. The attacks ceased within a week, and for two years, up to the date of the communication, had not returned. Dr. W. adduces, as confirmatory of the benefit of this drug, the case of a pregnant woman attacked by epilepsy, who, after trying various remedies in vain, was quickly cured by the use of valerianate of zinc and morphia.

X.

CAUSES AND SIGNIFICATION OF SUBSCAPULAR FRIC-TION.—Under this title Dr. Terrillon (*Archives de Méd.*, 1874) calls attention to a peculiar crepitation produced by movements of the scapula over the chest-walls in spare persons, and in patients who suffer from anchylosis of the shoulder.

The contact of the two osseous surfaces rubbing one over the other causes the formation of a serous sac. This presents a special pathology with which it is necessary that the physician should be acquainted. Dr. Terrillon, in his communication to the *Archives*, treats of inflammations, abscesses, hygromata, cysts containing rice-like particles, etc., as occurring in connection with this serous sac.—*Le Progrès Méd.*, February 6.

X.

DERMOID CYST OF THE OVARY.—M. Terrier communicates the following observation. It concerns a patient coming under his care for a voluminous tumor occupying the right iliac fossa and presenting all the characters of an ovarian cyst.

An exploratory puncture revealed the existence in this tumor of epithelial cells, of hair, and of a thin grayish-white liquid. An operation was decided upon, and was accomplished without difficulty. The results were favorable. The temperature never rose above 100.5° F. Retention of urine supervened without appreciable cause, but disappeared at the end of five days. Histological examination of the sac showed that it presented on its internal aspect the appearance of skin. In fact, hair, fatty granules, sudoriferous glands, etc., were found.—*Bull. Gén. de Thérap.*, March 15.

X.

THERAPEUTIC NOTES.

LIQUID GLYCERIN FOR BURNS.—

R Calcis oxid., gr. iii;
Spirit. chloroformi, gr. iii;
Glycerinæ, fʒiiss.—M.

Charpie is dipped in the mixture, and placed over the burned surface; it is then covered with a thin sheet of gutta-percha, and the whole surrounded with a loose bandage. It is important that the charpie should be closely applied to the entire burned surface. The pain ceases almost instantly, and the sore heals very rapidly.—*Trans. N. Y. Med. Jour.*

WORMS.—

R Santonini, gr. iii;
Sacch. alb., q. s.

M.—Ft. in chart. no. iii.

For a child of two and a half years one of these powders may be given at bedtime for three days, the food in the mean time being soups and broths in small quantity. On the morning of the fourth day a dose of calomel and jalap may be given; subsequently a tonic.

TREATMENT OF PERTUSSIS BY INHALATION.—

R Ext. belladonnæ, ℥ v ad x;
Potass. bromid., ℥i;
Ammon. bromid., ℥ii;
Aquæ, fʒii.—M.

Inhale one tablespoonful in the ordinary steam atomizer; or this amount may be diluted by filling up the glass with water. In severe cases this may be used twice daily, until the urgency of the symptoms is relieved, and then continue once daily until the cough has entirely disappeared.—*Boston Med. and Surg. Jour.*

PROLAPSUS ANI TREATED BY ERGOTIN.—Von Langenbeck is said to treat prolapsus ani with astonishing success by hypodermic injections of a solution of ergotin (five to fifteen parts in one hundred of water). He replaces the bowel, and, inserting the point of the syringe about an inch deep into the cellular tissue, throws in from one to two grains of ergotin. This should be repeated every three or four days for several weeks, hardened fecal masses having been first removed by injection.—*Medical Press*.

COLLODION AND MORPHINE IN SHINGLES.—After exhausting all the methods advised for the treatment of shingles, and especially the atrocious pains which attend this disease, Dr. Bourdon adopted the following. A stratum of morphinated collodion (collodion 30 grammes, muriate of morphia 50 centigrammes) was applied to the diseased parts without opening the vesicles. The pain ceased on the second day, and after seven or eight days, when the pellicle fell off, the vesicles had entirely disappeared, and only a slight redness was apparent.—*Gaz. Med. Ital.*

INJECTION IN BLENNORRAGIA.—

R Potass. bromid., ʒiiss;
Glycerinæ, ʒiii;
Aq. destillat., ʒiv.—M.

Inject every four hours, bromide of potassium being administered at the same time internally. This injection may not only be used in the chronic but also in the acute stage of the disorder. When the disease approaches the end of its course, an astringent may be added to this solution. Abstinence from beer and stimulating food is advisable.

PHILADELPHIA
MEDICAL TIMES.
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The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

PRINCIPLES AND STATISTICS IN HOSPITALISM.

THERE are two distinct methods of solving the various practical questions which arise in our every-day professional life: one, the application of principles, the other, the use of statistics. Each of these methods may lead to false results, because human nature is weak and fallible. Principles as seen by any one mind are simply the conceptions, original or acquired, of that mind, and may be as devoid of truth as a fool is of wisdom. Further, even if these principles, *i.e.*, the premises, be correct, the application, *i.e.*, the assumed sequence, may be as illogical as the average human intellect. To enumerate the loopholes by which error may creep into statistical arguments would be as hopeless a task as to attempt to count human failures in observation or statement.

These things being so, it seems to us that only by the free use of both methods, and the correcting of one by the other, can truth be arrived at.

It appears to us a fixed principle that absolute freedom to the air affords the best possible ventilation; that no artificial means can ventilate any large apartment so thoroughly as nature ventilates the single tree-top of the open prairie. If this principle be true, it appears logical that the nearer any apartment in its conditions approximates to the open air the better ventilation it will have. A simple roof raised upon high distant iron pillars ought to afford, so far as ventilation is concerned, the best possible form of a

ward, and, we believe, in a warm climate it would yield the best surgical results. No statistics have ever seemed to us necessary to determine that an open tent, if it can be well warmed, offers a better chance than any surgical ward to those who are so unfortunate as to undergo serious operations. Carrying out this same line of argument, it seems a natural conclusion that the best summer ventilation in an ordinary hospital is to be obtained by having an abundance of windows and keeping them always wide open.

Holding these views, we naturally were somewhat surprised by the following paragraph, from the first paper in the current number of the *American Journal of the Medical Sciences*:

"Of the total number of deaths after amputations during forty-five years, we find that the mortality of the different months of these years was as follows:

January, 11 died.	July, 29 died.
February, 15 "	August, 22 "
March, 15 "	September, 19 "
April, 16 "	October, 21 "
May, 27 "	November, 11 "
June, 25 "	December, 19 "

"It will be observed that the smallest number of deaths occurred in January and November, when the hospital wards have pure but heated air by forced ventilation, while in the months of May, June, July, and August, when the ventilation in the hospital is effected by simply opening windows, we find the largest number of deaths. Mr. Edward Richardson has examined the hospital records, and has found that during a period of twenty-five years, from 1850 to 1874, inclusive, in 2015 deaths in the surgical wards, the months of February and November also exhibit the smallest number; from May to September the mortality was very much greater; while in July and August the deaths were double the number of those in February. These results may be induced by various agencies, but they naturally suggest the subject of ventilation in the summer in hospital wards, and whether proper change in the air of a ward can be brought about without open fireplaces or currents of air forced from a fan. It is well known that opening all the windows of a ward in certain states of the atmosphere will not change the air at all, and there is little doubt that either of the above-mentioned plans to secure ventilation might be adopted with much better results."

The more the conclusions reached in this paragraph are thought over, the more definitely does it appear that either the principle which we have brought forward or else the statistics just detailed are at fault. Not being able to find any incorrectness in the principles, we have naturally been led to examine the statistics. We have not access to the records of the Hospital, but Dr. Morton in the

earlier portion of his paper gives a chronological table of all the operations performed in the hospital during the years 1870, '71, '72, '73, and '74. Rearranging this list, so that it shall show the number of operations per month, *prest*o, the number of deaths is greater in July than in January *because* there are *more cases*; the mortality *per cent.* is greatly less in the summer than in the winter months. This is the list:

WINTER MONTHS.

Cases. Died.				Cases. Died.			
January, 1870	2	1		November, 1870	2	0	
" 1871	2	1		" 1871	4	0	
" 1872	1	1		" 1872	2	1	
" 1873	2	1		" 1873	2	0	
" 1874	3	3		" 1874	1	1	
	10	7			11	2	

Mortality per cent., 42 $\frac{1}{2}$.

SUMMER MONTHS.

Cases. Died.				Cases. Died.			
May, 1870	3	1		June, 1870	3	1	
" 1871	5	1		" 1871	7	2	
" 1872	1	0		" 1872	3	0	
" 1873	1	1		" 1873	3	0	
" 1874	2	0		" 1874	1	1	
	12	3			17	4	
July, 1870	1	0		Aug., 1870	3	1	
" 1871	1	0		" 1871	2	2	
" 1872	4	1		" 1872	4	0	
" 1873	4	1		" 1873	3	0	
" 1874	8	1		" 1874	3	1	
	18	3			15	4	

Mortality per cent., 22 $\frac{1}{10}$.

These figures apply, of course, only to certain years, but they are seemingly sufficient to reconcile statistics and principle until, at least, it is shown by actual demonstration that the apparent fallacy in the numerical argument does not exist. It is hardly possible that what is true of five years is not true of many years,—namely, that there is more business activity and consequently that there are more accidents in this region during the summer than during the winter.

A good deal of interest has been excited by the report before one of the London societies of a case of injury in the spine, in which it is asserted that for a long time the temperature remained above 120° F., reaching even 125° F. It was noted at the same time that the feet were icy cold. The only record we have ever known equal to this was that of a Siberian traveller who stated that the weather was so cold that the birds froze stiff whilst flying, and that a mercurial thermometer registered —224° F. It seems to us most probable that there was some deception in the *Lancet* case; for the fact that the temperature was taken only in the ax-

illæ indicates that the gentlemen in charge did not so thoroughly appreciate the seeming impossibilities of their record as to guard against possible deception. There is much reason to believe that, in certain diseases, local rises of temperature occur, and H. Weber reports cases of hysteria in which the axillary temperatures as recorded were far above normal, although when the instrument was placed in the mouth the mercury failed to rise. How the deceptive rise was produced Dr. Weber could not determine; but all modern physiology teaches that a general temperature of 125° is simply impossible, and the record must be viewed as the result either of a deception or of an extreme localized fever.

PRE-EMINENT among all the private schools of medicine that have flourished on the Western continent, whether judged by the length of its life, the number of its graduates, or the fame of its teachers, is, and probably must forever remain, that school in Chant Street which has just been uprooted by the ruthless hand of the Government. Opened in March, 1820, its halls have been the nurseries of medical babes and the gymnasia of young medical athletes for more than half a century. Surely the memory of such an institution is worthy of embalming in that most abundant of all modern fluids,—printers' ink. It is, therefore, with great pleasure that we call attention to the farewell oration pronounced over the dying bed of the alma mater of such a numerous progeny.* Let every graduate furnish himself with this skilfully wrought monument, that now, if age be already come upon him, or in the future, if the evil days have not yet come nigh, he may, as a voyager upon a map, retrace the journeyings of his former years.

THE constant improvement in the opportunities offered in this city for the study of medicine during the spring and fall months is very great and very gratifying. To any one desirous of acquiring a thorough medical education, no city on the continent to-day holds out greater inducements. Indeed, we doubt if, on the whole, any other city is as well prepared to produce thoroughly educated physicians. Our clinical advantages are certainly superior to anything outside of New York, and now to them are added means of practical instruction upon the fundamental sciences of our art. Laboratories for histology and pathology, chemistry, and physiology are now being brought into operation, under most competent teachers.

* The History of the Philadelphia School of Anatomy, and its Relations to Medical Teaching. A lecture delivered March 1, 1875, at its dissolution, by William W. Keen, M.D. Philadelphia, J. B. Lippincott & Co., 1875.

CORRESPONDENCE.

NEW YORK MEDICO-LEGAL SOCIETY.

AT the regular meeting of the New York Medico-Legal Society, Thursday, March 25, Prof. F. H. Hamilton spoke on "Malpractice in Surgery; its Causes and Remedies."

He said he would take as a text of his remarks a letter which he had received a few days previously from a surgeon in Illinois, asking him if he had a form of agreement to be made between patient and surgeon, as without something of this kind it would not be safe, and it would be scarcely possible, to pursue the practice of surgery.

This was a fair specimen of the character of letters frequently received by him. Some of them anticipate the possibility of prosecution; others seek advice as to how they are to escape a threatened prosecution; and still others ask his counsel and attendance when they are actually prosecuted. It is patent to both the legal and medical professions that for the past few years in this country surgeons have been exceedingly subject to prosecutions. During that period extending from the year 1833 to 1866, prosecutions were so frequent in various parts of the United States, but he believed less so in the Southern States, that many eminent surgeons were obliged from self-protection to abandon the practice of surgery. He had known as many as four cases of prosecution for malpractice to occur in a single term of the court. Twenty-five or thirty years ago, there was scarcely a surgeon practising in the Northern States who had not been sued for malpractice, and one-half of whom had not been mulcted in damages.

Why is it that a special department in surgery is more liable to dangers than others? Why does it happen that amputations, and more especially fractures and dislocations, are more than any other branch of surgery exposed to prosecution? Is it because gentlemen who practise this department are less learned and less skilful than are those in other departments of surgery? He thought not.

During the last quarter of a century, foreign countries have not hesitated to give us the credit of superiority in the treatment of fractures. In their books on surgery, a large proportion of cases adduced is taken from this side of the water.

To what, then, shall it be attributed? He was disposed to attribute it to the fact that the profession itself has not ascertained fully what the science and art of surgery can accomplish. He had supposed, in his earlier days, that it was the lawyer—the mean, pettifogging lawyer—who spurred on cases of malpractice, —who induced unfortunate patients to prosecute in the hope that they might recover damages for personal injury. But he had long since changed his mind in this regard. He is now convinced that it is because the profession, while they have had a constant desire to elevate the science and practice of surgery, have not understood fully what is possible and what is impossible to be accomplished in the profession.

In every department of surgery save in the department of fractures and dislocations, surgeons have furnished themselves with statistics as to the relative degree of success of the various operations. It is indicated what percentage of recoveries and deaths to expect. But how is it with fractures and dislocations, which are the most frequent source of prosecutions?

He had constructed tables, the result of much and patient study, the first of which appeared in 1852, and they were published originally in the *Buffalo Medical Journal*. Up to the year 1859, this was the only serious attempt made to ascertain what is the average result in the treatment of broken limbs.

At the request of the American Medical Association, he had prepared a paper on the subject, in which he not only gave the cases as originally tabulated, but a large number of additional cases.

The speaker here referred to the labors of Mr. Pott, of England, who, by his work, succeeded in revolutionizing in that country the treatment of fractures and dislocations, by the introduction of the "physiological method." He employed an inclined plane. With various modifications, it had become the almost universal practice. Dupuytren and others in France did not accede to the views of Pott, so that the triumph was not so great as in England. In this country he gained but a very few followers. There was only a single advocate for his original method, while for the modification there were only two or three. At that time it was stated that the practice of surgery was a disgrace to English surgery; and now, at the expiration of many years, it is again stated, notwithstanding all the so-called improvements and advances, that the treatment of dislocations and fractures is a disgrace to English surgery. This statement at this time is attributed to an eminent surgeon in St. Bartholomew's Hospital,—Mr. Skey.

Now, the speaker was more leniently disposed towards the English surgeon than is Mr. Skey. He did not believe that the English surgeons are any less skilful in the treatment of fractures and dislocations than the French; neither did he consider them any less skilful than Americans. But they had failed to see what the real difficulty is, namely, *that there are impossibilities attempted and claimed which never can be accomplished!*

But Mr. Pott was not the only surgeon who thought that he had discovered a method which would be universal. Mr. South says that anything less than a nearly perfect limb makes the surgeon responsible. Others claim that a fractured thigh can be made the original length; while it is claimed by many that nearly all bones can be made to unite so that the original length can be preserved.

Now, these were the facts a few years ago. He would not say what had caused the change; but it has been frequently remarked to him by gentlemen of the legal profession that prosecutions for malpractice are not so frequent as they were a few years ago. It is evident that there was a decline up to a very recent period. They are, however, becoming more frequent, and the fact calls for an explanation. In the lapse of

time, as year after year rolls around, and he might say almost every year, and almost every month in the year, there are modifications in the treatment of fractures and dislocations. Almost invariably, when new modifications in the treatment of these accidents are announced, new prosecutions are instituted. This seems to have an unfavorable influence upon the people.

Now, in order to prevent this, it will be necessary that some one man shall stand up in every generation as a sacrifice; because whoever attempts to stand between surgery and prosecutions for malpractice must make an enormous personal sacrifice. He had sacrificed much for this purpose, and he proposed to revise his tables a second time. In his investigations so far he has discovered that there have been improvements in surgery, and that great advances have been made in the treatment of fractures, but only occasionally; a thousand things have been suggested, but it is only now and then that a single instance can be pointed out in which there is an advance. Perfection is still unattained. Surgeons still make a little shortening of one-half to three-fourths of an inch in fractures of the clavicle, and a corresponding shortening in fractures of the tibia and fibula.

The remedy for the legal trouble has already been indicated. It consists in not assuming in the treatment of fractures and dislocations more than surgery is able to accomplish. So long as more is claimed than can be accomplished, prosecutions will be instituted, and, he thought, justly. Surgeons cannot certainly complain if, having established a standard of perfection, and having failed to maintain it, the people resort to legal steps to obtain relief.

Dr. Hamilton concluded by calling upon Dr. Stephen Smith, who has been engaged for some years in collecting and collating material for an extensive work on surgical malpractice, to relate his experiences and add his remarks to those which had already been made.

Dr. Smith said he had devoted considerable attention to the subject discussed, and for the last twenty years has made it a business to collect cases with the view of finally publishing them in book form, in order to illustrate the legal responsibility pertaining to surgical, medical, obstetrical, and, lastly, dental practice. He believes that he has collected over two thousand cases. During the earlier history of mankind there was a period of unwritten medicine. At that period the practice of the art rested with patriarchs and priests. After a time, rules of practice were written. This was the beginning of written history. With this period began the history of suits for malpractice, for physicians were obliged to practise according to the rules laid down in the books, and they did not do it sometimes. If accidents happened under these circumstances, the surgeon was liable.

In later history, physicians were held to the latest improvements in the art; and at this day courts are laying down the rule that patients are entitled to the benefit of the best methods of treatment in vogue, and that every physician is in duty bound to know what are

the latest improvements, and to treat his patient skillfully. By the word "skilfully" the courts mean skill sufficient to cure the case, and practice according to the very best methods of to-day. And whether the physician or surgeon resides at New York or in Kansas, the courts will hold very much the same view. We are possessed of the means of such rapid diffusion of knowledge and information that the physician very remote from the centres of civilization and learning is as capable of acquainting himself with the latest improvements as his more centrally located brother. And the former cannot escape the responsibility of his actions any more than the latter. The courts have held and do hold them responsible, even according to the information diffused in the medical journals of the day. The physician and surgeon is expected to take the journals, and thus to keep up with the profession. The remedy, he thought, consisted in the publication of average results, and in not claiming too much. He thought that suits for malpractice in the end exerted a healthy influence, for they weeded out of the profession incompetent men, and made book-writers more careful in their statements.

Several lawyers spoke,—Messrs. J. F. Miller, D. S. Riddle, and others,—who thought the trouble rested with the doctors because they were all "at sea" with their facts, and unless they settled upon certain facts and confined themselves thereto they must expect trouble.

Dr. L. A. Sayre introduced a draft of a law which was originally drawn up by himself, and passed by the New York Legislature, but was vetoed by Gov. Hoffman, on the ground of special legislation. It was modified, and afterwards passed by the State of Ohio. He hoped this Society would lend its influence to its adoption by this State, and that it might be adopted by every State in the Union. Its purpose is to require plaintiffs in malpractice suits to give bonds for the expenses of the suit.

W.

REVIEWS AND BOOK NOTICES.

THE MAINTENANCE OF HEALTH. A Medical Work for Lay Readers. By J. MILNER FOTHERGILL, M.D.

Dr. Fothergill is very widely and favorably known to the profession on both sides of the Atlantic by his strictly professional writings, and an examination of the very handsome brochure before us convinces us that before long he will be as widely and favorably known among the more intelligent of the laity. Whilst there is little or nothing in the book absolutely new to the well-informed physician, yet almost any one can gather from its pages many suggestions for his own thoughts and many hints as to the management of patients; and all can conscientiously recommend it to their patients as containing a large amount of most important information conveyed in a most agreeable form. As an instance of the suggestiveness of the work, we mention one idea from its pages which strikes us as novel and plausible, but whose truth seems to us somewhat doubtful. The suggestion, which is conveyed in the most modest and commendable manner, is that in early marriage very frequently sexual indulgence is unbridled, and "that the eldest child in his recklessness and thoughtless self-indulgence tells of the life of the parents at the time of his genesis." We do not believe

that in this country the eldest child is as a rule any less self-contained than his younger brothers, and would rather be inclined to attribute the fact spoken of by Dr. Fothergill as existing in Great Britain to the law of entail. The knowledge that the property is inevitably to be his, the absence of business training, the peculiar deference paid by friends, the toadyism and indulgence of whims by servants, must have a tremendous influence upon the moral development of the eldest scion of a noble house.

LECTURES ON PATHOLOGICAL ANATOMY. By SAMUEL WILKS, M.D., F.R.S., and WALTER MOXON, M.D., F.R.C.S. 8vo, pp. 672. Second Edition. Philadelphia, Lindsay & Blakiston, 1875.

The first edition of this work was issued by Dr. Wilks in June, 1859, and consisted of a series of lectures which he delivered in a voluntary course during the summer session at Guy's Hospital, London. Based on a very large experience in a daily study of the dissection of the dead for fifteen years, and a personal record of between two thousand and three thousand cases, the book in its first edition was a valuable one, characterized by the correctness of its descriptions. Dr. Moxon has prepared the second edition, adding the results of a personal experience at Guy's Hospital, similar to that of Dr. Wilks, a sifting of the stores of facts contained in the invaluable "Transactions of the Pathological Society" of London, and an accurate knowledge of the modern pathology, as enunciated by Virchow and his collaborators. Through these means he has produced a volume which is a faithful and sufficiently copious exposition of morbid anatomy.

The order of arrangement pursued is that adopted in the museum of Guy's Hospital, and includes diseases of the bones; diseases of the joints; diseases of bursæ, tendons, and muscle; diseases of the heart; diseases of the arteries; diseases of the veins; diseases of the lymphatic vessels; diseases of the lymphatic glands; diseases of the nervous system; diseases of the skin; diseases of the respiratory system; diseases of the alimentary canal; diseases of the liver; diseases of the gall-bladder and ducts; diseases of the pancreas; diseases of the spleen; diseases of the supra-renal bodies; diseases of the urinary organs; diseases of the male sexual organs; diseases of the female sexual organs; and on the association of morbid conditions. It will thus be seen that the entire field of special pathology is covered; and it may further be said that there are few subjects which have not received a detailed consideration, while there are still fewer that are omitted; so that, by the aid of the copious index which is appended, the general practitioner can easily find some information upon any morbid specimen which may fall under his notice. For the wants, therefore, of the practitioner we know of no volume so well adapted. The close student of pathology will have to look elsewhere for those preliminary chapters on general pathology which are so necessary to a thorough knowledge of the subject. But his library will also be incomplete without this volume. It is mortifying to have to acknowledge that works on morbid anatomy have not generally a large sale in the American market; but the increased prominence recently given to the subject in some of our medical schools will tend to change this, and we hope the sale of this will be an exception to the rule. The typography, binding, and general appearance of the book are pleasing, and invite purchase. I. T.

CHLORAL AND IPECACUANHA IN CROUP.—In a bad case of croup with urgent dyspnoea, give to a child fifteen months old two minims of ipecacuanha wine, with two grains of chloral, every two, three, or four hours, according to the effect produced.—*Dr. G. Barclay.*

SELECTIONS.

NETTER ON THE POSSIBILITY OF CURING ACUTE PERITONITIS BY INJECTING A SUFFICIENT QUANTITY OF TEPID WATER INTO THE PERITONEAL CAVITY.—Dr. Netter (*Revue Médicale de l'Est*, January 15, 1875) quotes some remarks made by Kœberlé in 1867 on a case of his in which acute peritonitis threatening death occurred after ovariectomy, but was checked and the patient saved by incision into the right flank, where he detected dulness, and the escape of a quantity of red serum from the peritoneal cavity. He gives extracts from the speeches of Kœberlé, himself, and others, at a long debate which followed the reading of this case at the Strasbourg Medical Society. The cause of the speedy relief when the fluid is detected and let out at once in these cases was the chief ground of debate.

Kœberlé, while insisting on speedy action, attributed the danger to the fluid becoming rapidly septic from its contiguity to the intestines.

Netter objected to this—1. Because of the rareness of true idiopathic peritonitis (*i.e.*, excluding cases of perforation, etc.); 2, because of the rareness of this typhoid or septic form itself. He considered the first product of the inflammatory action as the most actively dangerous, and compared it to the acrid mucus which is discharged from the nostrils at the onset of coryza. He also pointed to the numerous successful ovariectomies of Kœberlé and others, successful in spite of handling of the parts, introduction of instruments, exposure to the air, etc., of the peritoneal cavity and its contents. These successes he attributed to the thorough cleansing of the peritoneum at the time of operation, and the speedy evacuation of any fluid which gathered afterwards.

The possibility of applying this principle to other forms of peritonitis was suggested by some of the speakers, and reflection on the subject led to the present proposal by M. Netter.

He considers it would not only be justifiable, but right, in cases of acute peritonitis, to make a small opening into the peritoneal cavity, and inject sufficient tepid water to dilute thoroughly its contents and form an artificial ascites. If relief follow, the injection should be repeated. He supports his proposal by the facts observed in the similar diseases of the pleuræ. When the pleura is dry the fever runs high, but when effusion comes the symptoms abate; and when effusion occurs at the onset often there are hardly any symptoms. Even when some fluid is effused into the peritoneum it gravitates, and the intestinal and upper surfaces become glued with the lymph. He affirms—1, that the liquid secreted in acute peritonitis has only noxious properties in proportion to its concentration; 2, that, largely diluted with water, it loses these noxious properties.

He gives in full an old paper by Dr. Herlin in 1767, on some experiments which he and others made on cats and dogs, ligaturing the bile-duct and puncturing the gall-bladder, and letting the bile into the peritoneum, afterwards practising warm-water injections. The animals appeared none the worse for the operation, though dogs, as Netter points out, are specially liable to peritonitis. He arrives at the following conclusions:

1. It is possible to cut short acute peritonitis by injections at its commencement.

2. If Herlin's experiments be repeated without the injections and the animals die, it will be because the injections were not used.

3. Since it has become a recognized practice to use injections when peritonitis comes on after ovariectomy, etc., so it should be in the other forms of peritonitis where there is no surgical opening to begin with. He

considers the adhesions formed by the intestines in puerperal and other cases a cause of the extreme gaseous distention and consequent dyspnoea and collapse: if the injections alone will not separate these adhesions, aid may be given by simple punctures, to let out the gas. He quotes from Kœberlé that these adhesions lead to little pouches full of serum or pus. In a note at the end of the paper he advocates leaving the wound open after herniotomy, and injecting, if necessary.

[The reporter has several times noticed the pouches referred to in post-mortem examinations, and that they are surrounded by extra inflammatory action: mere puncture and draining of course give no exit for such collections of serum or pus.—*Rep.*]—*J. Knowsley Thornton, in London Medical Record.*

LORAIN ON CASES OF SUDDEN EMOTIONS IN WOMEN PRODUCING PERSISTENT NEUROSES, SUCH AS HYSTERIA, CHLOROSIS, CHOREA, AND PARALYSIS AGITANS.—M. Lorain, after noticing the popular tendency to argue on the *post hoc ergo propter hoc* principle in nearly every disease, asserts that this tendency has caused medical men in many cases to treat such accounts with skepticism. "We have good reason," he says, "to reject these two facile explanations; but should we therefore always refuse them in a spirit of routine, or should we sometimes admit them, and to what extent?"

With a view to the settlement of these questions, he submits to notice the following reflections on cases which have occurred in his own experience. In each of these cases there has been some sudden emotion followed by neuroses, which have persisted for a greater or less period.

Other considerations arise from the study of these cases. Among these are the following: Does the accident decide the seat of the morbid manifestations which follow it? Have such accidents corresponding morbid conditions? Is it right to call a woman hysterical who suffers from hemiplegia, or who falls into a state of clonic convulsions with globus hystericus and other morbid sensations?

Shall a woman, however, who becomes after a similar accident choreic, be excluded from the ranks of hysterical patients because of her chorea?

Is it also necessary to make a separate class for chlorotic patients?

The author protests against such exclusiveness, and proposes that all the cases of neuroses occurring in women after sudden accidents should be included in one term, *Féminisme*.

Among the observations recorded are the following. Two girls suffered from chorea following fright. At the time of the accident they were menstruating, and in consequence of it the discharge was immediately arrested. In one the chorea is combined with rheumatic symptoms; in the other there are so many undoubted hysterical symptoms that she must be classed among the hysterical patients. [Is it not probable that the latter of these two patients has imitated the choreic symptoms of the former? They are reported to have been in the same ward.]

In another case, a girl, aged fifteen, who had been ailing and out of sorts for some time, was startled during menstruation by a flash of lightning, which struck the ground about thirty yards from her. The catamenia were arrested, after having lasted for but a small portion of the time they generally did. The next day she was attacked with chorea, which became very severe.

Another girl, aged twenty, after the bite of a horse, was seized with hysterical convulsions, which were followed by loss of cuticular sensibility, and ataxic symptoms. In another case of a girl, aged twenty, after the receipt of some bad news, hysterical paralysis occurred.

The last case related is that of a girl, aged seventeen, who was attacked by paralysis agitans after having been frightened during the siege of Paris by the explosion of a shell which killed several people who were standing near her.—*W. Kesteven, Jr., in London Medical Record.*

THE COUCHARD.—Dr. Diver, of Caterham, has invented a very ingenious contrivance for exerting pressure on the abdomen and back of parturient women, which he styles the "couchard." It is a kind of apparatus which the woman puts on during labor, and the patient is enabled, by pulling during the pains, to give considerable pressure to the back and support to the uterus at the same time. The patient puts on a pair of connected pads, one over the back, the other over the front of the body, and then places her feet in a pair of stirrups. Through the tops of these stirrups a cord running from the handle passes so that the hands and feet act in antagonism. This tightens the cord, which is attached to a soft cushioned pad over the back, which draws that pad and the one in front together, and gives great relief to the patient.

Patients have expressed themselves as greatly pleased by the support this very ingeniously devised apparatus affords to them during labor. Dr. E. Diver has taken much trouble in perfecting this invention of his, and writes us that additional experience shows him how much relief it gives to many of his patients. We should mention that, by means of a strong cord attached to the handle, and pulling over the end of the bed, the patient can employ the same abdominal and back pressure comfortably whilst lying in bed. All such devices for assisting in the alleviation of suffering are highly commendable, and we wish success to Dr. Diver's Couchard.—*Medical Press and Circular.*

DUBOUX ON RHEUMATISMAL INSANITY.—In a case of rheumatismal insanity reported in the *Bulletin Médical de la Suisse Romande* for December, 1874, the patient was suffering from acute articular rheumatism with endocarditis, and presented all the characteristics of rheumatismal madness,—combination and alternations of various forms of mental alienation, mania, melancholia, dementia, with a marked predominance of notions of persecution and hallucinations of sight and hearing of a generally distressing character. For several days there was marked stammering, a symptom which has before been noted in some cases of this kind. M. Duboux brings into notice the commonness of melancholic mania in rheumatismal insanity; in the great majority of cases coinciding with cardiac disease. On the other hand, it is interesting to note how among lunatics suffering from the persecution-delirium, generally with persistent hallucination, we find individuals laboring under heart-disease, especially among old men.—*London Medical Record.*

GLEANINGS FROM OUR EXCHANGES.

EXPLORATION OF THE ABDOMINAL CAVITY IN EXTREME CASES OF OBSTRUCTION OF THE BOWEL.—Mr. Teale (*Lancet*, March 13) believes that if further experience should strengthen the growing surgical opinion in favor of greater boldness in opening the peritoneal cavity, we may look for as great an advance in the management of many obscure and hitherto hopeless cases of obstruction of the bowel as has taken place in the once deemed hopeless cases of ovarian disease.

As a contribution to the knowledge of this subject, Mr. T. gives notes of the following case:

He was consulted in October, 1873, by a man forty

years of age, for severe pain in the small of the back, distressing when he moved about, most severe at night. He passed blood and mucus from the bowel, and the evacuations were small and narrow. On examination, nothing was found amiss with the rectum. He was advised rest, with occasional morphia suppositories, and careful regulation of his diet. Under this treatment the evacuations became perfectly regular and natural, except that the discharge of blood and the pain did not cease.

Five weeks later, a small tumor was felt near the left iliac fossa. He was then ordered to take small doses of Dover's powder, and to make further modifications of diet, the result of which was that the discharge of blood gradually diminished, and since Christmas, 1873, has not reappeared. At Christmas he resumed work, though suffering at times as much as ever from the pain in the back. From Christmas to June he got on fairly well, easing his pain by suppositories and Dover's powders, and having a *solid, fully-formed evacuation* daily, free from blood and mucus.

In the middle of June the action of the bowels, which up to this date had continued to be perfectly natural, was suddenly arrested; aperients and enemata were of no avail, and the body became intensely tympanitic. At the end of ten days, during which no relief could be obtained, by the advice of his medical attendant, Mr. Atkinson, he was admitted under my care, at the Leeds Infirmary, on July 1, 1874.

After his admission, he was treated by nutritive enemata and hypodermic injections, with a very small allowance of brandy and milk by the stomach.

At the end of four weeks from the commencement of the complete obstruction, all hope of spontaneous resolution was abandoned. During the latter three or four days he had suffered excruciating pain, had lost flesh rapidly, and had several times been delirious; and it seemed as if, unrelieved, he could not possibly live more than three or four days.

After consultation, it was decided to open the abdominal cavity in order to search for the seat and the cause of the stricture, and to determine the possibility of relieving the obstruction by right or left lumbar colotomy.

The patient having been chloroformed, an incision was made in the middle line below the umbilicus, and manual exploration made. The first points made out were the distended cæcum and the junction of the ileum with the colon. The ascending colon and the transverse colon were then traced, which latter, owing to its extreme distention, first descended to the pelvis and then doubled back and ascended in front of the left lumbar region to the left kidney, lying in front of and concealing the descending colon. Finally, below the crest of the ileum the distended bowel was felt to terminate in a hard mass of the size of a walnut, apparently attached to the bowel, and puckering it. It was clear, therefore, that left lumbar colotomy would give the relief desired. Five wire sutures were then introduced into the wound and tightened temporarily as far as was deemed prudent, considering the tense state of the abdomen. The patient having been turned to a prone position, the usual operation of Amussat was performed in the left loin. The opening of the colon was followed by a large escape of flatus and of semi-fluid fecal matter, which so far reduced the distention of the abdomen as to allow the wire sutures to be tightened up, and effectually to close the wound in the front of the abdomen.

The patient made a good recovery from the operation. For the first day or two large quantities of liquid fecal matter escaped by the lumbar opening, and about the third day some solid scybalous matter was evacuated per anum, the passage of which was attended with

very severe pain. By degrees more and more of the contents of the bowel escaped per anum, until, at the end of three months, not more than one-fifth passed through the lumbar opening.

Three months later, and six months after the operation, he was feeling better than he had for a year past. It was feared, however, that the disease might be returning, since there was a good deal of pain and bearing down, and but a small portion of the fæces were passed per anum.

Mr. Teale adds two cases of somewhat similar operation in cases where peritonitis had set in, the result being in each case, possibly from too long delay, unfavorable.

REMARKABLE ELEVATION OF TEMPERATURE.—At a recent meeting of the Clinical Society (*Lancet*, March 6) Mr. J. W. Teale read notes of a case occurring under his care, of which the following is an abstract:

A young lady, thrown from her horse in the hunting-field at the beginning of September, 1874, sustained fracture of two of her ribs and some obscure injury to the spine. In due course the fractured bones united, and all would have gone well but that the pain and tenderness in the back ominously persisted. Symptoms of spinal meningitis set in, and, concurrently with them, the temperature of the body, which had regained the normal shortly after the accident, began to rise. One month after the accident it was 101° , in another month it reached 105° , and thence its extraordinary and unprecedented progress can only be reckoned by days. Between November 8 and 12 it fluctuated between 110° and the great elevation of 118° . But it did not stop here. The next day it on two occasions reached 122° , falling in the interval to 114° . Thence the rise and fall of the index of the thermometer was strange in the extreme, and it would be tedious to refer here to all its fluctuations. Suffice it to say that it kept for three weeks between a minimum of 108° (on one occasion only) and a maximum of 122° ; throughout December it registered the comparatively low level of 110° during the first half of the month, mounting up to between 112° and 114° during the second half; and then, in the early days of January, it rapidly subsided to 104° , becoming normal on the 10th of the month. The condition of the patient during this very super-normal state of body heat was, save in the periods of highest range, apparently not one of extreme danger; we gather, indeed, that during December her general health was improving and the spinal symptoms were slowly but surely subsiding. Nor were the circulatory or respiratory functions much deranged, the pulse never being above 120, and the respiration not being notably embarrassed. To be sure, she emaciated much and was extremely prostrate, the catamenia ceased, and the urine was very scanty and loaded; but a continuous body heat of 102° or less, lasting for two months, would *a priori* have done as much.

The utmost care was exercised by Mr. Teale in order to remove all sources of error. No fewer than seven thermometers were used in the course of the case; they were inspected by two or three trustworthy witnesses before and after each application, and the results were always immediately recorded in writing. The temperature was taken in the axillæ by two thermometers at once, and then these were interchanged and the observation repeated.

APOMORPHIA.—Within the last two years much has been learned of this drug, which seems likely to prove a valuable addition to therapeutics, and recently a tolerably complete monograph upon it has been published by M. Victor Bourgeois (*De l'Apomorphin; Recherches cliniques sur un nouvel émétique*, Paris, 1874).

The conclusions to which this author is led (*Dublin Med. Jour.*, March) accord in all essential points with

the observations of Marthiessen and Wright, and are briefly as follows:

1. Apomorphia, or rather hydrochlorate of apomorphia, when pure and employed in suitable doses, is a rapid, simple, and harmless emetic.

2. It is *rapid*, for its action always takes place at latest within ten minutes after administration.

3. It is a *simple* emetic, for it does not appear to exert any influence upon the other functions.

4. It is innocent, and does not seem to possess dangerous toxic properties.

5. Lastly, the facility with which it can be administered by hypodermic injection fulfils a therapeutic desideratum, and suggests its adoption by physicians in some special circumstances, such as the medication of children and of the insane.

As an average dose, for an adult man, of the Scotch hydrochlorate of apomorphia prepared by Macfarlan & Co., Edinburgh, M. Bourgeois fixes on one-sixth grain hypodermically and one-half grain by the mouth. The best form of solution is that obtained by dissolving one part of the salt in one hundred parts of distilled water. If the proportion of the salt be greater the solution becomes muddy, and it is necessary to add one or two drops of HCl in order to clear it,—a serious objection in the case of a liquid intended for subcutaneous injection.

TWO CASES OF IDIOPATHIC TETANUS.—TREATMENT BY CHLORAL—RECOVERY.—The *Indian Medical Gazette*, February 1, contains the following cases:

The first, a boy 13 years of age, was treated by Surgeon-Major G. T. Hunter for tetanus, occurring after exposure to the sun and beating with a cane. No contusions or wounds could be discovered. Two peculiarities were noticeable: 1. The tetanic spasm commenced at the diaphragm, then affected the fingers of the right hand, and afterwards extended to the muscles of the abdomen and legs. 2. Deglutition as regards liquid nourishment was easy throughout the course of the disease, though he could not open his mouth more than half an inch for several days. Treatment: tr. cannabis indicæ, ℥ x, and potass. bromid., grs. v every third hour, and chloral hydrat. grs. xii three times a day, together with inhalations of chloroform as required. The diet was generous, and the boy took as much as twenty-two ounces of wine daily, without any intoxicating effect. Recovery took place in about a month.

The second case, under care of Surgeon H. W. Hill, was that of a Hindoo, 40 years of age, who suffered from a severe but typical attack of idiopathic tetanus, caused probably by exposure to the damp chilly air of night, when the body was relaxed by the heat of the day and the constitution rendered "below par" by a recent febrile attack.

During the first few days the tetanic spasms were exceedingly frequent and severe, but these gradually yielded to the steady administration of chloral hydrate, grs. xx thrice daily, which was kept up through the whole course of the disease, which terminated in recovery at the end of six weeks.

TWO CASES OF TETANUS FOLLOWING FROST-BITE.—The following cases are recorded in full in the *Canada Lancet*, March, 1875. They occurred under the care of Dr. Bethune, of Toronto. The first was that of a farmer who was exposed to intense cold for about three hours while driving. His feet and fingers became severely frost-bitten without his becoming aware of the fact until he arrived home. On admission to the Toronto General Hospital, four days later, the toes and the greater part of both feet were found in a condition of moist gangrene.

The fingers and parts of both hands on the dorsal surface were black and dry. Four days after admission

he was seized with tetanic symptoms, which rapidly developed. Chloral hydrate in thirty-grain doses, with extract of calabar bean in one-fourth-grain hypodermic doses until five grains had been given, failed to combat the disease, and the patient died in thirty hours after the accession of the attack.

The second case was that of a man who, having lain out in a barn all night, had both feet severely frost-bitten, subsequently becoming partially gangrenous. In this case trismus set in nine days after exposure, and soon developed into well-marked tetanus, to which the patient succumbed in about thirty hours.

The treatment in this case consisted in hypodermic injections of, first, one grain of morphia, and subsequently the same in one-half grain injections every hour.

EXTIRPATION OF THE PAROTID GLAND FOR MALIGNANT DISEASE.—Dr. Charles Brigham communicates to the *Western Lancet* for February, 1875, the notes of a case in which he had removed the entire right parotid successfully by means of a curved vertical incision two and a half inches in length, with the concavity towards the lobe of the ear, with subsequent dissection by the aid of both scalpel and fingers. Eight ligatures were placed upon arteries, the wound cauterized with pure carbolic acid, and dressed with cotton-wool and Lister's gauze.

The tumor weighed two ounces, and was of cartilaginous hardness. Under the microscope it was found to contain small oval cells. The patient recovered without an untoward symptom. The facial nerve having been severed in the course of the operation, partial paralysis of the parts supplied by it was the result. Six weeks later the paralysis of the face was better, but the upper eyelid was still paralyzed, and there was little if any hearing in the ear of the affected side.

MISCELLANY.

ON BAPTISM AT BIRTH.—In every community composed of religious bodies holding different tenets of faith on some points, it is believed to be conducive to harmony and good feeling, as well as consistent with that broad and liberal catholicity of sentiment that should always characterize the professor of the healing art, to conform to the usages of his patrons respecting rites having, in their views, important religious significance.

As containing an authorized expression of the views of the Roman Catholic church respecting baptism, the following translation from the "Cours d'Accouchements," a recent great work on obstetrics by Dr. L. J. Hubert, Obstetric Professor in the Catholic University of Louvain, is submitted to professional readers:

This work is especially dedicated to the young gentlemen who come to this Catholic University to receive their medical education. Believing that it may be useful to those who may be frequently called to administer this sacrament to draw their attention to the teaching of the church, I have decided to finish this "Cours d'Accouchements" by a special chapter on the subject of ante-natal baptism of infants.

When an infant is not in immediate danger of death, it is at the church and by a priest it should be baptized; but when its life is imperilled, baptism may be conferred everywhere and by everybody (ecclesiastic or laic, man

or woman, believer or infidel), and it is valid, provided it is administered with the *intention*, the *material*, and with the *formula* required.

Who, in case of peril, should administer baptism?

If the child is born, and a priest is present, he should always perform the rite. The father or mother may perform it only in the absence of any other qualified person. If the infant is born, and there is a man present capable of performing it, he should do it in preference to any woman, or even a midwife. If the fœtus is not born, baptism in utero should be administered, either by the obstetrician or midwife in attendance.

The general purpose or intention to do what the church does is sufficient.

The material is water, pure water, from spring, river, or well, and whether previously blessed or not.

The formula is: I baptize you in the name of the Father, of the Son, and of the Holy Spirit.

This formula should be distinctly articulated, and loud enough to be audible to the person himself.

The baptism is absolute or conditional according to circumstances, as we shall proceed to show. The manner varies as to whether the child is born or not.

A. If the child is born, the baptizer should himself pour water on the head of the child at three times, corresponding with the mention of the respective names of the Holy Trinity.

If there is any doubt respecting the life of the newborn, the formula should be modified thus: If thou art living, I baptize thee, etc.

If there exists any doubt of the human nature of the being to be baptized (viz., if a marked monstrosity or rudimentary embryo), it should be added, "If you are a rational being, I baptize you," etc. Abortions should receive the rite in the same manner and modified in the same manner as the infant at term.

If the ovum should be expelled entire, the baptism should first be done through the membranes, saying: If you are fit to receive baptism, I baptize you, etc.; then, having opened the membranes, the rite is repeated, adding, if thou hast not been baptized. When the baptism is thus conditional, the condition mentioned must be distinctly articulated; it is not sufficient merely to think or to will it. Such is the canonical law.

B. Supposing the fœtus is still in whole or in part unborn, it then becomes necessary to baptize it in utero, varying the method according to circumstances.

(a.) If the head is delivered, it may be baptized, either absolutely or conditionally, as if the birth were completed, and no subsequent baptism will be required.

(b.) But if an arm or foot present, those parts should be baptized, and the danger persisting, the chest and the head should be successively baptized, with the formula: If thou hast not been baptized, etc.

(c.) But if the fœtus is still enclosed in the uterus, the baptism should be performed by carrying the fingers, or a piece of lint or sponge, or using a siphon or syringe, and with the formula as before stated, and modified according to the circumstances. After birth it may be rebaptized if alive.—*Peninsular Journal of Medicine.*

THE DAWN OF LIFE.—Professor Williamson, in a lecture on the "Dawn of Life," delivered at Glasgow on the 2d ult., referred to the experiments of Dr. Bastian, and remarked that one positive experiment showing that animal life did not result after the application of heat and the careful exclusion of the atmosphere was of more value than a hundred experiments giving an opposite result. He mentioned an interesting fact derived from the recent experiments of two Liverpool gentlemen who had sedulously watched by a powerful microscope the habits of the infusoria. They subjected the water in which they were contained to 250° of heat, and found that, while the mature animalcules were destroyed, the germs were not, but a heat of 300° destroyed the germs also. Professor Williamson believed that if these experiments were verified, the question of spontaneous generation might be considered to be practically settled. The deepest reaches of the microscope had shown that life was produced from life,—that this one universal law prevailed in the organic world, just as the farthest reaches of the telescope had shown that gravitation prevailed in the remotest systems in space.—*London Medical Record.*

At the last meeting of the Board of Trustees of the University of Pennsylvania, Dr. James Tyson was elected Professor of Pathology, Dr. Louis A. Duhring Professor of Diseases of the Skin, and Dr. H. C. Wood Professor of Diseases of the Nervous System, in the University Hospital.

"PUNCH" ON HOLLOWAY'S ASYLUM.—*Punch* furnishes this inscription for the front of the idiot-asylum founded by Mr. Holloway, who made his fortune in "patent medicines":

"Not oft is fate so just: see wealth restored
Back to the simple source from which it poured."

NOTES AND QUERIES.

A STATED meeting of the Northern Medical Association of Philadelphia will be held at their hall, 608 Fairmount Avenue, on Friday evening, April 23, at 8 o'clock.

Dr. A. K. Minich will read a paper on "Purpura Hæmorrhagica treated by Ergotin."

The medical profession are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 6, 1875, TO APRIL 12, 1875, INCLUSIVE.

ROSE, GEO. S., ASSISTANT-SURGEON.—Assigned to temporary duty at Madison Barracks, New York. S. O. 69, Military Division of the Atlantic, April 10, 1875.

ELBREY, F. W., ASSISTANT-SURGEON.—To report to the Commanding General, Department of the South, for assignment to duty. S. O. 63, A. G. O., April 10, 1875.

CHEBBONNIER, A. V., MEDICAL STOREKEEPER.—Granted leave of absence for one month. S. O. 63, c. s., A. G. O.

ERRATUM.

FOR Dr. Gebhard, read Dr. Gerhard, in the report of the County Medical Society Meeting in our last issue.

SATURDAY, APRIL 24, 1875.

ORIGINAL COMMUNICATIONS.

TYPHOID FEVER: ITS DIAGNOSIS, PROGNOSIS, AND GENERAL MANAGEMENT.

BY J. G. HAMILTON, M.D.

MR. PRESIDENT and Gentlemen of the Society: By invitation of your Business Committee it has become my duty to prepare a paper for this evening; and as in the past season typhoid fever, in relation to its causation and extension, was introduced to your notice, so, on the present occasion, some cursory remarks will be offered in reference to its diagnosis, prognosis, and general management.

There is not the charm of novelty in the subject now a second time presented for your discussion; it is, in fact, many years since a most intelligent member of your then Business Committee objected to an evening being spent in the consideration of typhoid fever,—so trite was the subject then regarded. But the disease, like phthisis, is to be met with almost everywhere, and prevails frequently in an epidemic and fatal form, exhibiting, in its career, singularly interesting and exceptional symptoms in connection with equally exceptional post-mortem conditions. The opinion, moreover, gaining ground that the disease is very often of local origin and susceptible of prevention, it has for some years past, like phthisis, claimed and received from gentlemen occupying the front rank in our profession renewed and earnest attention. The subject, too, is altogether a practical one, and as nearly all present must have had cases under treatment you have become more or less familiar with the march, terminations, and, probably, post-mortem appearances of typhoid fever, and are thus qualified to contribute some fact, observation, or deduction illustrating the topic before us. The discussions that follow the introductory papers read here should, as a rule, be the more important object of our assembling in this place, and if, in these "discussional meetings," as they are called, subjects merely novel, or having no general practical application, are too often introduced, the interest flags; for in such cases either no discussion ensues, or it is too limited in extent or superficial in character to embrace much that is advantageous in practice. The diagnosis, prognosis, and general management of typhoid fever are the points, then, to which your attention will for a short time be called; not in a formal attempt on my part, in a paper of this length, to examine in detail or to determine that which may be true, or false, or doubtful in this connection, but rather in presenting some cursory observations bearing upon each point designated, that may serve to elicit from members the facts and observations within their experience, and the deductions or conclusions to which their practice, reading, and reflection may have given birth.

The late Professor John K. Mitchell once re-

marked to me that he had often found, in consultation with physicians of considerable experience, that the diagnosis of typhoid fever, especially when insidious and in its first stage, caused them a good deal of embarrassment. The trouble then, as at the present time, was to distinguish it from typhus fever, bilious remittent, at that time very prevalent, local subacute inflammations, and a general typhoid condition often met with in various affections. In this city, or the adjacent country, there need not be much difficulty in assigning to its proper nosological position a well-marked case of typhoid fever, as distinct from typhus. Without occupying time by a general detail of the divergences observed in the symptoms of these two fevers, it may here be stated that the earlier period of the eruption in typhus, its much greater extension over the surface of the body, with its strongly-marked measly character, will, in general, serve, even in the early stage, to distinguish it from typhoid fever. Independent of the earlier and less positive diagnostic symptoms, there are collateral circumstances that possess no mean value where doubt exists. Typhus is found most frequently in the vicinity of wharves occupied with foreign shipping, and in almshouses, jails, or similar public institutions. If isolated cases are occasionally seen remote from such points, they can often be traced back to these sources. Typhoid fever, on the contrary, makes its appearance, and spreads, often with great fatality, in inland sections of the country. The liability, moreover, to either malady in reference to age, is another element that must not be overlooked, the great susceptibility of youth and early manhood to attacks of typhoid presenting a striking contrast to what is observed in typhus fever. Another fact of importance in this connection is the extreme disparity in the frequency of occurrence of these two fevers. Of fifty cases of continued fever to which the physician in private practice in this vicinity might be called, probably forty-five, at least, would prove to be typhoid, nor would it be surprising if, under the conditions in view, he should not meet, in one or more years, a case of typhus fever. Bilious remittent fever, to a great degree supplanted by typhoid, still occurs frequently upon the low grounds skirting cities and in similar places in the interior, and, despite the term remittent, occasions, at times, in reference to typhoid, more difficulty in the diagnosis than does the latter in regard to typhus. The remissions in bilious are sometimes no more conspicuous than in typhoid fever, and when the latter is accompanied with biliary derangement, constituting the bilious typhoid of Chomel, the diagnosis may be perplexing, unless the thermometric indication should be of unequivocal character.

The more important difficulty in the diagnosis of typhoid fever is in relation to certain conditions simulating those observed in this disease, and thought to arise from persistent irritation of certain organs, or nervous centres,—or from subacute inflammation of the same; or, again, in the general typhoid state so often met with in practice, the product, perhaps, of the local affections just alluded to,

or the result of some obscure general physiological abnormalities of which we are profoundly ignorant. The most frequent and deceptive of the local affections are those of the brain, spinal marrow, respiratory organs, and intestines. That deaths from these affections, especially when accompanied with the general typhoid state alluded to, are often returned to the Health Office as typhoid fever, cannot be doubted, whilst typhoid fever may be so strongly complicated with local disease as to embarrass even the experienced practitioner, and be returned under the name of one or another of the complications designated. Errors of this kind cannot well occur, unless in the exceptional cases alluded to; for where the disease is fully developed, and presents its prominent features, as seen in the headache of the first week, the characteristic diarrhoea, the eruption, distinctive in form and time of appearance, the epistaxis, the tympanitis and gurgling in the right iliac region, the hemorrhage from the bowels, and, possibly, in addition, symptoms indicative of perforation, there can be no doubt as to the nature of the malady. Comparatively few cases, however, exhibit the combination of symptoms here cited, and in the early period of the disease some of them are not to be seen, or may be absent altogether, and yet a fatal issue ensue. The physician should endeavor to determine, if possible at an early period, the nature of the attack, for this is the time when the patient and friends are anxious to know its real character.

The prognosis, as in other cases, must be based upon a just consideration of what experience has shown to be the favorable or unfavorable symptoms and signs of the disease, taken in connection with the all-important collateral agencies of situation and surroundings, in regard to ventilation, cleanliness, nursing, and appropriate alimentation. A guarded general prognosis is, in an especial manner, all that can be attempted in this disease, so various in its complications and uncertain in its mode of termination, especially in reference to that fearful accident,—perforation,—never in our power to predict either from the earlier or the actual symptoms. The duration of typhoid fever, omitting exceptional cases, is, as you are aware, in general terms, from one to six weeks. When, as it sometimes happens, a single week limits the march of the disease, death is nearly always the result, from passive congestion of organs essential to life; and such cases may occur as well in the young and robust as in the aged or broken-down. When the attack begins or is soon followed with violent and persistent delirium, it is liable to prove dangerous or fatal at an early period. If delirium, active or passive, having ceased for a week or more, should again return, the prospect of recovery is much diminished. Greater or less activity of the pulse and fever does not, within certain limits, of itself furnish any decided indication of danger; neither does the singular and sudden fall in the frequency of the pulse, sometimes observed, portend an unfavorable issue. If the patient rest heavily upon his back with limbs extended, and breathe laboriously and with unusual noise, the danger is imminent; and if to this condition irreg-

ularity in respiration supervene, the case may be deemed wellnigh hopeless, as in all probability serious brain-complication has taken place. A very red, smooth, glazed or chapped surface of the tongue, or when covered with dark sordes, denotes, undoubtedly, a severe attack, but indicates in no decided manner actual and extreme danger; yet a livid tongue, or when it is very tremulous and unnaturally pale, though otherwise moist and natural, is more significant, and implies danger from congestion. The disappearance from the tongue of tremor and difficulty in exposing it when requested, is a most encouraging change, and not less cheering are increased quickness in the motions of the eyes and greater power of deglutition. Moderate diarrhoea, with slight tympanitis, may be expected, and only when excessive can danger be apprehended from this condition. In this connection it may be stated that Dr. Nathan Smith "never saw a fatal case of typhoid fever where diarrhoea was absent." Hemorrhage from the bowels, if moderate and seldom repeated, cannot generally be regarded as very dangerous, yet will naturally cause anxiety, from our inability to foresee the moment and amount of a possibly impending hemorrhage. Alarming as a discharge of blood from the bowels, even in small quantity, is regarded by the patient or friends, it has often proven critical and salutary, by an immediate and permanent improvement in the general condition; and hence the question arises whether the practitioner of the present day is not too timid in reference to using the lancet. When a patient, seriously unwell of the disease, expresses himself as being nearly or quite well, proposing, perhaps, to dress and go to business the same or the ensuing day, the physician will generally be safe in pre-saging a fatal issue, though the event may be still distant. In conversation with the late Dr. J. K. Mitchell, in regard to this delusion, he said, "It is evidence of an utterly subverted and broken condition of the whole nervous system."

Dr. Austin Flint regards the robust and fleshy as more likely to succumb to the disease than persons of a moderate conformation,—a view coincident with that of many other practitioners. By the same eminent authority the belief is expressed that typhoid fever does not often prove fatal independent of local complications,—an opinion that we think must be accepted with some hesitation. Bilious fever, formerly so prevalent, whilst comparatively free from local complications, ended very often in death; the typhoid form of fever, from its greater tendency to prostration of vital force, should, even when uncomplicated, yet strongly developed, as in an epidemic season, prove at least equally destructive to life. Attacks of typhoid fever after merely a short abode in places where the disease exists were thought by Chomel to be more fatal than after a more protracted residence in such places, and with this view the observations of Louis and others coincide. Statistics prove that the mortality of the disease increases with age, yet they also demonstrate that the deaths are greatly more frequent in young persons, the malady not prevailing to a great extent among very young children or the

aged. From puberty until the twenty-first year is a very fatal period for the disease, arising, perhaps, from this being the season of rapid growth and constitutional change. When treating the complaint, it should be borne in mind that recoveries are frequent under a combination of circumstances apparently of the most adverse character, so that a premature fatal prognosis should be guarded against by the medical attendant.

In entering upon the general remedial and medical treatment of typhoid fever, we are to bear in mind two circumstances: first, that the disease, unless hastened through its march by the occurrence of fatal passive congestion or active inflammatory complication, is of long duration, rarely reaching its critical stage before the lapse of from three to four and a half weeks, a large proportion of the deaths occurring within these limits, or symptoms of improvement then taking place. The other circumstance is that this disease is apt to occasion unusual alarm to the patient and friends,—much more, perhaps, than is warrantable, were it not that the knowledge is pretty widely diffused that, with the most promising symptoms, fatal perforation may, in the latter stage of the disease, or even when convalescence is apparently far advanced, suddenly blast the flattering prospect in view. It is, in part, the apprehension of this possible catastrophe that continues so long to cause anxiety, and leads, perhaps, to a more protracted attendance upon the part of the physician than occurs in any other acute disease. These two conditions, then, in connection with others of similar character, will serve to show how important it is that we lose not sight of the psychological features of the case, capable of determining, as they sometimes are, in favor of life or death, so nearly balanced in this disease may be the struggling agencies tending to one or the other issue.

It is all-important that the patient occupy, if possible, a room of sufficient size, that admits of perfect ventilation, yet without exposing him to currents of cold or damp air, as this would augment the risk of a bronchial affection that very often complicates the disease, and may finally terminate in phthisis if there be a predisposition in this direction. Instruction should therefore be given regarding the location of the bed; and it is best generally not to have either side to the wall, so that the patient may enjoy more freedom and convenience in changing his position,—an object important in more than one respect. Light should be admitted, when there is a choice, from the proper direction, and in greater or less amount, having due regard to the wishes of the patient and the exigencies of the case. Encumbering the chamber with bed- or body-clothing, or other woollen or cotton material not in use, should be prohibited, and every unsightly or other object that might arrest the attention and annoy the patient, either in his calm or delirious moments, should be kept from view. In a disease so protracted it is of great importance to keep the bed in perfect order, permitting no portions of this or of the body-clothing to gather into welts or folds, especially when the patient, half delirious or semi-conscious,

with diminished sensibility, is in no condition to call attention to that which may result in excoriations or ulcerations of serious character, so serious, perhaps, as to turn unfavorably the balance now wavering between life and death. Strict attention is to be given to cleanliness, the timely change of clothing, and the immediate removal of offensive excretions. If the patient is unable, the nurse should make it her duty to cleanse his mouth, gums, and teeth with cool water occasionally,—the patient generally receiving this as a grateful and refreshing operation. The hands and wrists, the feet and legs, should often be bathed, and gently chafed with a morsel of woollen material wrung from warm whisky and water, so that the annoying heat, dryness, and scurfiness of the extremities may be prevented or diminished, and the patient be not only comforted but his situation improved. A matter of the greatest importance is faithful, conscientious nursing; and where this service can be had from a qualified member of the family the best result will probably be obtained, and thus risk of injury to our patient from the ignorance of the inexperienced, or the presumption and self-sufficiency of a professional nurse, will be avoided. Whilst it is proper that the wishes of the patient, when reasonable, should be gratified, it is, as a rule, best that company be excluded from the chamber, for out of a number of visitors it often happens that some one lacking in prudence, intelligence, or forethought gives expression to that which may prove a source of much mental inquietude and serious injury to the patient. As in health a calm, cheerful frame of mind is, by its influence upon the organs of secretion, conducive to a proper performance of the digestive and other functions, so in disease does a similar relationship obtain. The necessity, then, in typhoid fever, with its low vitality and inordinate waste of tissue, to avert every mental condition that might interpose an obstacle to the reception and digestion of food, is obvious and of paramount importance. Every word, look, or line of conduct tending to engender unpleasant or despondent emotions should be sedulously avoided, whilst all that is encouraging, cheerful, and hope-inspiring must be summoned to our aid in conducting the case to a favorable issue.

The medicinal treatment of typhoid fever can with difficulty be deduced from any certain appreciation of its causation and pathology. We are consequently compelled to act upon general principles, and treat conditions, so far as these may be learned, from symptoms of unequivocal signification. It would be out of place, on this occasion, even to name a tithe of the various agents employed for the cure of this malady, nor is it intended to dwell long upon this subject.

The asserted value of excessive doses of quinine, or the use of the cold bath for the arrest, *in limine*, or the utility of the sulphites and other agents for the modification and rapid cure of typhoid fever, are not generally accepted as well-established facts, nor do we think the profession errs in hesitating to concede the potency of specifics in a disease of this character. We have in this affection several conditions of primary importance to contend with

demanding especial attention; and, fortunately, we have at command, in these cases, medicinal and other agents often of great power in the amelioration or removal of the pathological state involved. One of the conditions alluded to is delirium. When this is merely occasional, transitory, and occurs only upon arising from sleep, it may not be regarded; should it, however, be more decided and persistent, coming on early in the attack, in a strong subject, a few leeches behind each ear, cold applications to the head and sinapisms to the lower extremities, may be employed, and, if no diarrhoea be present, several grains of blue pill, or calomel and rhubarb, should also be given, to procure one or two free evacuations. Where the patient is rather weak in constitution, with but little heat of the forehead, or in the latter stage of the disease, when the vital power is low, warm applications to the head will sometimes prove more efficacious than cold, and in this case alcoholic stimulus ought to be given in such amount as the condition of the patient and the effect produced may render necessary; should this fail, recourse must be had to opium or some of its preparations. Protracted wakefulness is a common, greatly injurious, and often difficult condition to obviate or remove. A few hours of natural sleep each night restores, probably, more than anything else the worn and exhausted energies of the patient, and contributes greatly to his recovery, so that it is of the utmost importance to guard against every agent that might in the least disturb the equanimity of his mind, especially during several hours previous to the usual time for sleep. Should the want of sleep become, as it easily may, alarming, and the ordinary anodynes fail to relieve, morphia alone, or, if there be much arterial excitement, combined with a small dose of tartar emetic, may be given cautiously, yet bearing in mind that morphia, when it is borne well, is more likely to produce the desired effect in one or two rather large doses than in small and oft-repeated portions. If these means fail, an injection of a small teaspoonful of laudanum in half a gill of thin starch for an adult may be used, and where much diarrhoea is present this had better first be tried. As protracted delirium or coma frequently leads to retention of urine, the physician should, by occasional examination, satisfy himself regarding the state of the bladder: otherwise serious injury may result from neglecting a timely use of the catheter. If diarrhoea be slight, the patient young and vigorous, and able to take a moderate amount of food, it is not requisite suddenly to arrest it; under opposite conditions exhaustion must ensue unless it be checked. For this purpose the stronger vegetable astringents, or the mineral acids, sulphuric or muriatic, should be employed, and, if insufficient, opium by the mouth, injection, or in both ways, and in such amount as the exigency of the situation may demand. If tympanitic distention accompany the diarrhoea, spirits of turpentine and tincture of opium in combination should be given, or turpentine injections; and care must be taken that the patient receive no flatulent food. If hemorrhage supervene, opium and acetate of lead should at once be prescribed

internally, a strong injection of the same kind administered, and the patient enjoined to remain perfectly quiet.

In every disease of typhoid character and of long duration, such as that under consideration, a principal object is to give such support as may tend to prevent the vitality of the organism from descending so low that little hope of recovery could be entertained. To effect this purpose, tonics and stimulants must be resorted to. In this point of view quinine holds the first place as a medicinal agent, and is generally most useful when given in three- or four-grain doses every four hours. The mineral acids are also found useful, especially when diarrhoea is present. As a stimulant, carbonate of ammonia has long been held in repute by many physicians, whilst a smaller number give the preference to the spirit of turpentine; and the estimate placed upon the latter by Dr. George B. Wood and others in typhoid fever and kindred conditions is, we think, deservedly high. It is most useful in the middle and latter stages, when tympanitis so often occurs, and, although not palatable, is apt to agree well with the stomach.

It would answer no important purpose to cite and comment upon a multitude of inferior tonics and stimulants finding place in the *materia medica*, as it is generally conceded that the most natural, useful, and trustworthy means of support is found in the proper use of suitable food and drink. But here, unfortunately, in a matter of vital importance, arises a difficulty; for, whilst practitioners do not differ greatly in regard to what is proper food, they are often at variance in reference to the quantity required within a certain time and under similar circumstances; nor are they in accord as regards the amount of alcoholic stimulus to be given within certain limits of time, if, indeed, its use should at any time be permitted. If, in this connection, we revert for a moment to the practice of physicians from the days of Sydenham until a somewhat recent period, may not the retrospect justly occasion surprise and mortification? It was not the custom then to insist upon an amount of food that could not fail to oppress the stomach and impair still more the power of digestion. So, too, in the use of ardent spirits or wine, the rule was to watch its effect, and, when this was beneficial, as evinced by a slower, softer, and fuller pulse, a gentle moistening of the skin, a calmer breathing, and a more tranquil condition of the nerves, they continued to use it, uncontrolled by ultra views,—the offspring, perhaps, of a morbid conscientiousness in regard to the use of intoxicating liquors even as a medicine.

An excessive use of alcoholic potions, unless by Dr. John Brown and a few other erratic spirits of that day, was not common in disease, neither was there in its use the same disregard of the state of the vital powers as we occasionally see at the present time.

The discrepancy of opinion and practice referred to is practically an unfortunate one. Typhoid fever, distinctively marked as its typical features are, is yet in its general character a representative pathological state, and if the extremes of practice on either side

be alone correct, consistency would seem to require their adoption in other affections distinct in origin and nature. But there is more than a doubt in the minds of most physicians regarding the propriety of ultraism in medical practice. By the general consent of mankind, it is admitted that safety and truth are commonly found in the middle path, and whilst the daring extremist in either medical, surgical, or obstetrical practice may present, for our admiration, an occasional brilliant success, he is, in the general statistical result, left far behind by the more cautious and logical conservative.

In regard to a choice of food, physicians are generally agreed that milk, beef- or mutton-tea, and the essence of either, made directly from the meat, or well-prepared soups, should constitute the chief nourishment of the patient; whilst he may be permitted, for a change, the use of mild farinaceous articles; these agreeing, sometimes, better than a continued use of the former. The amount to be given at once, and the frequency of repetition, can best be determined by the physician; yet the patient, if at all intelligent, should be consulted upon this point, and care must be taken that during the night he is not so often importuned to take food that sleep is effectually banished. It will sometimes happen that the patient, in a somnolent, listless state, will, on all occasions when food is offered, open his mouth, as it were, automatically, and receive, swallow, and also retain it. This has too often been taken as proof of a large amount and frequent repetition being requisite, and thus inordinate quantities of food are given, far beyond the actual digestive power. That such practice is injurious cannot well be doubted, for it is to be remembered that each pathological state has its own special provisory and reservative corpuscular actions, obscure in their intimate nature, it is true, yet visible enough in their effects, and not to be disregarded. Whilst upon this point, it may be proper to state that the opposite plan of giving to a patient in typhoid fever a minimum of food is, in general, still more objectionable and injurious, but, fortunately, is not often practised.

Under the influence of a very few eminent physicians, alcoholic stimulation had run to excess until a somewhat recent period. In an uncomplicated and mild case of typhoid fever, very little or perhaps no stimulus may be required. Where inflammation, especially of the brain, occurs, it is inadmissible, unless in exceptional cases. But a difficulty here presents itself; for it is sometimes almost impossible to decide, though the symptoms point strongly in that direction, upon the existence of inflammation. The greatest caution is here necessary in the use of stimulus, and prudent delay is often the safer practice. Where prostration, actual or threatened, ensues, stimulus is often productive of the greatest advantages, yet should be given solely with reference to its effects. It is best to suspend its use as soon as may safely be done; its too protracted employment tending to injure the digestion and thus prolong the convalescence, or to create a desire for its habitual use.

But this introduction has already exceeded the limit at first intended, and must now be brought to

a conclusion in expressing the hope that, although nothing new has been presented to your notice, some casual remark or other may have recalled to the minds of members and may lead to the expression of some fact, observation, or deduction of practical value regarding the diagnosis, prognosis, and treatment of typhoid fever.

A REPLY TO THE ARTICLE BY JOSEPH R. BECK, M.D., ON THE USE OF IODIDE OF POTASSIUM IN SYPHILIS.*

BY EDWARD N. BRUSH, M.D.,

Buffalo, New York.

AS Dr. Beck, in his article, declines any scientific controversy upon the subject of his paper, I will not at present indulge in any such discussion; neither will I, at this time, exhibit any "overwhelming statistical statements." This article has been too hastily prepared to allow the employment of either mode of controversy. I will, therefore, simply glance at what Dr. Beck endeavors to show, and strive to point out certain indigestible portions of the "food for contemplation" which he furnishes in the two cases cited. Unfortunately for the stability of his theory, he has presented in these two cases nothing which shows that the use of the iodide of potassium in the *earlier* stages of syphilis is of equal or more value than the employment of mercurials.

Had he presented a case which proved that the iodide of potassium did not, as he says mercury does, "act too quickly," his paper might have been entitled to more consideration. He says, "We are well aware of the fact that, under the use of mercurials, secondary manifestations may be rapidly dissipated, and we have been enabled, owing to this fact, to discharge our patients in a few weeks without spot or blemish. But, alas for this treatment! we have in *every case* only succeeded in *masking* the disease. . . . We will surely have to deal with tertiary manifestations."

At the very outset of his paper I have to criticise his treatment. He says that mercury acts too quickly, and that by its use we are enabled to *discharge our patients in a few weeks*. Herein lies the fault. I have been taught to believe that the administration of mercury should be continued for months rather than weeks, and have looked upon a course of mild mercurial treatment extending over a period of from fifteen to eighteen months as essential in every case. When this course is pursued, mercury will not be found to act too quickly, and, in a vast majority of cases, tertiary manifestations, if present, will be of a slight and insignificant character. When these are present, Dr. Beck himself is not a more earnest advocate of the use of iodide of potassium than I am. But even in such instances I shall continue to believe, with Dr. Sturgis, that the administration of mercury is not without value.

1. In regard to Case I., the doctor's report leads me to believe that he was treating a case of tertiary

* Philadelphia Medical Times, March 13, 1875, vol. v. No. 176.

syphilis, in which case no one will dispute with him the value of the treatment which he pursued. I think that even Dr. Sturgis, whose views he criticises, will agree with him in that respect. This being the case, he has only shown additional evidence of the value of the iodide in the tertiary forms of syphilis, and has not disproven the efficacy of mercury, *properly* administered, in the early stages.

2. In reference to the same case, he says, "This case had its origin in what certain self so-called leaders in syphilography are pleased to denominate 'chancroid.'" I am very much interested in the subject of the unity or duality of the venereal poison, and am anxiously looking for facts, but I am compelled in this case to ask what may seem an impertinent question: How do you know? The doctor gives us no evidence that he saw the case before it fell into his hands, as reported. This being the case, his statements must be based on the testimony of the patient, and he certainly must know, after seeing so many cases as he would have us believe, that this is very poor testimony to go by. This same objection holds in regard to Case II. The sore which was contracted in 1851, he says, was *soft*. Again, How does he know? I must beg of him when he gives us that promised review, in order to make it exhaustive, as he says he will, to give his authority for saying that a sore is hard or soft, or, as he seems to prefer it, a chancre or chancroid. If he treated the initial lesion in 1851, he is in a condition to testify; if not, unless his data are obtained from a competent physician who did, his evidence cannot be taken by those who want only *solid*, well-proven, and *well-observed* facts. It may be also said in regard to this case, as of Case I., that the dispute does not lie upon the treatment of tertiary syphilis without mercury, as in many instances I believe that it can be done successfully. The question is this: Can mercury be dispensed with in the treatment of syphilis? Dr. Beck's two cases afford no proof *pro* or *con* on the question. He simply reiterates what the merest tyro in syphilography ought to know, that iodide of potassium is an excellent remedy in the tertiary manifestations of the disease. How much more violent these manifestations would have been had no mercury been used, in the two cases cited, he leaves us to conjecture.

What results might have been expected had the non-mercurial treatment been pursued *from the first*, he fails to show by illustrative cases, and in just this failure lies the weakest point of his article, so far as establishing his theory is concerned.

In conclusion, Dr. Beck's test of the cure of his patient by the production of iodism by the administration of ten-grain doses a year after all treatment has ceased, seems open to many objections. It is a well-known fact that a patient at different times, and under different circumstances, will not tolerate the same amount of iodide of potassium which he will at others. Ten or fifteen grains will produce iodism in a patient who has not taken it for some time, when a short time previous one hundred grains have been administered three times

daily without producing any unpleasant symptoms. In regard to the use of large doses of the iodide, I heartily endorse all that the doctor says.

8 SOUTH DIVISION STREET.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF PROF. H. C. WOOD, JR.

APHASIA, AND PARALYSIS OF RIGHT ARM.—AUTOPSY.

LIZZIE L., single, æt. 60; Ireland; very temperate; been in this country twenty years; says her health was always good previous to her attack; never had epileptic fits. Family history good. A year previous to the time of her admission, she woke one night and found that she had lost power in the right arm. She suffered no pain at the time, no headache, no aches in the bones, no sore mouth or tongue such as might have followed an epileptic convulsion. The following morning she discovered that she had entirely lost the power of speaking, although the idea of speech seems not to have been interfered with. After the attack she remained in bed a couple of days; not that she could not get up, but at the desire of her family. No physician was called. She remained at home for about a year, her arm still paralyzed, and with no improvement in her speech. During this time she had a number of epileptiform convulsions, which seem mainly to have affected the right arm, but never had any headache. At the end of the year she entered the house.

On her admission, November 15, 1874, she appeared pretty healthy, the hearing not at all impaired in either ear, the eyesight good; ophthalmoscopic examination negative in results. No apparent paralysis of facial muscles. The left corner of the mouth possibly a little drawn. When told to protrude her tongue, could not do it, nor could she put the tongue to the roof of the mouth; she could, however, lick her lips. She pronounced the labials very well; the linguals were managed with more difficulty; *r* and *l* were altogether beyond her. She could swallow very well, and had never bitten her tongue in eating. She had decided aphasia, mainly amnesic, but slightly ataxic in character. This aphasia was nearly perfect, as she was able to repeat most words after a person; but her own vocabulary was confined to yes and no and the interjections. She had great loss of power in right arm, but the power of the leg on that side seemed unimpaired. The sensibility of right arm about half that in left. The electro-sensibility the same. Electro-tractility also the same,—about half in the right what it was in the left. Her spirits were good at all times excepting when religious topics were introduced: when these were touched upon, however remotely, she burst into a paroxysm of tears.

She was ordered gr. $\frac{1}{25}$ phosphorus (Bullock & Crenshaw's granules) thrice daily, with an iron tonic.

Shortly after admission, she became excited by a visit from her sister, and was thrown into an epileptic convulsion, which at first pervaded the whole body, but in about a half-minute subsided, except in the right arm. The patient came to herself sufficiently to endeavor to reduce the spasm in the right arm long before it had subsided. After this she slept for some hours.

February 19, she had a second convulsion, which, as before, affected chiefly the right side. A full minute after the general spasm had ceased, the patient sat up in bed grasping her right hand (which was closely shut, with the thumb turned in), and endeavored to control the spasm.

March 5, the patient wished to leave the house, and her condition was as follows: speech very much improved, the patient being capable of making herself understood with considerable difficulty, but much more readily than when she entered. She could say *s* perfectly, and *r* tolerably. Her right arm was almost as strong as the left; the sensibility, electro and otherwise, not improved. She said, "Terrible times in my ward," with very good pronunciation.

Her spirits were still good, and religious topics were approached without exciting her in the least. Same treatment as above has been continued to the present.

March 6, 1875, very unexpectedly, before she had left the house, the patient died. She had been pretty well the morning of her death, when symptoms of collapse suddenly supervened. She lay with body bathed in a cold sweat, face pinched, pale, tongue dry, pulse 110, respiration 24. She was unable to speak, but seemed perfectly sensible, and, on being asked to do so, she indicated the abdomen as the seat of pain. She grew rapidly weaker, and died in the course of an hour, without a convulsion or even a twitch of the face. It should be added that the right arm seemed totally powerless after the collapse set in.

Post-mortem, three hours after death.—Body emaciated, feet slightly oedematous, blood fluid, lungs perfectly healthy. Heart eleven ounces, and in a condition of advanced fatty degeneration, as revealed by the microscope; arteries extensively atheromatous throughout. Liver cirrhotic, and somewhat "hobnailed." Kidneys of the fatty, contracted type. Substance of skull very brittle. Brain, fifty-two ounces, but much smaller than the cranial cavity, so much so that the dura mater could be picked up in folds. There was absence, however, of the usual compensating serous effusion. The pia mater was somewhat cloudy, but not adherent to the dura. There was a slight serous effusion under it on the convexity of the brain. At the base and under the cerebellum, and between it and the medulla, there was slight but distinct extravasation of blood. On the surface of the left hemisphere there was an irregular spot, apparently the seat of a former clot, measuring three-fourths to one and three-fourths inches, to which the membranes were adherent, and which was depressed, soft, and of a yellowish hue. This area began above, at a point opposite the anterior central convolution, followed the course of the vertical branch of the fissure of Sylvius, and affected chiefly the upper part of the third frontal convolution, touching the extreme upper part of the second frontal convolution, and involving the lower anterior angle of the operculum. In the fissure of Sylvius the membranes were stained and adherent. The convolutions of the island of Reil were almost entirely effaced. The brain-substance immediately adjacent to the eroded island was not softened, neither was it stained with hæmatoidin.

TRANSLATIONS.

DISCUSSION UPON THE EFFECTS OF NITRITE OF AMYL.—At a recent meeting of the Medico-Psychological Society of Berlin (*Wien. Med. Presse*, February 28), a discussion took place upon the effects of nitrite of amyl. Dr. Solger said that the flushing of the face produced by the inhalation of this remedy must be ascribed to a paralysis of the centres of innervation of the arteries supplying a certain area.

Other centres than those supplying the face are at times affected. He had himself experienced flushing of the hands and feet. He had used the nitrite in a case of unilateral clonic spasm in a child, without success. Chloroform used in the same case caused the

convulsions to disappear for some time. The effect of chloroform seemed to be antagonistic to that of nitrite of amyl. The vessels of the pia mater exposed in a rabbit under the influence of chloroform were seen to be contracted, while upon inhalation of the nitrite they became enlarged.

Dr. Jastrowitz had used the nitrite of amyl with good results in asthmatics, but in the case of melancholia and other forms of insanity without beneficial effect. Inhalation of the drug causes disagreeable dizziness. He would not, therefore, use it in cases of vertigo. His impression was that hyperæmia of the brain did not extend throughout that organ, since, in patients who had used the remedy for some time, hyperæmia of the optic papilla could not be observed either during inhalation or in the intervals. Dr. J. mentioned cases illustrating the danger sometimes attending the inhalation of the nitrite, and the necessity of caution in its employment. In these cases sudden collapse followed its use. He had subsequently met with Schüller's experiments showing that a marked contraction of the vessels of the pia follow the usual dilatation. He had also observed that certain patients voluntarily alluded to the fact that objects appeared of a yellow color subsequent to the use of the nitrite.

Dr. Mendel agreed with Dr. Jastrowitz as regards the local character of the hyperæmia produced. He had arrived at this conclusion by taking the temperature of the external auditory meatus, which remained unchanged.

Dr. Solger remarked that, as to vertigo, it is produced by various conditions, and there might be varieties of dizziness in which the nitrite would prove very useful. Schüller's experiments were worthy of careful attention. They proved that the inhalation of nitrite of amyl should not be abruptly, but gradually, broken off. He spoke of its value in those cases of epilepsy where sufficient warning was given by an aura, and related the case of a workman subject to such attacks, who was able to ward them off and continue his occupation by the expedient of keeping a small vial of the nitrite by him, which he made use of as soon as he was aware of the premonitory symptoms. He was in the habit of using, in hospital and private practice, certain sealed capillary tubes containing three to five drops of the nitrite, and wrapped in a bag. In this receptacle no evaporation or decomposition could occur. The patient carried one of these about with him, and when needed it could be broken by a movement of the hand almost instantaneously, the rag serving to retain the medicine for inhalation, and also to provide for its more gradual withdrawal.

Dr. Sander remarked that in his cases of sudden collapse the inhalation had been withdrawn gradually and the chamber was full of the nitrite vapor.

Dr. Bernhardt said that the effect of the nitrite would not show itself so quickly in increase of temperature in the external meatus; even if a thermometer were placed in the brain or under the pia mater, it would be doubtful if a rise could be observed; besides, it was certain that the vessels of the pia become enlarged, and these supply the brain.

Dr. Mendel said, on the contrary, that the effect of chloral could easily be ascertained in the rise of temperature in the ear.

Dr. Westphal protested against drawing too hastily diagnostic conclusions from a few positive or negative results of the inhalation of nitrite of amyl. X.

THE NATURE OF CHRONIC ALOPECIA.—Dr. J. Pincus (*Berliner Klin. Wochen.*, February 1) says that nineteen out of every twenty cases of baldness are due to the disease known as alopecia simplex, alopecia furfuracea, or calvities senilis and prematura.

Two views of the pathology of this disease have been held: one ascribing the accompanying atrophy of the cutis to a primary wasting away of the vessels; the other, to an atrophy of the peripheric nerve-fibres. Dr. Pincus believes that a condensation of the connective tissue of the lower layers of the cutis takes place in the earlier stage of the disease, accompanied by a loss of typical length on the part of the hairs, but not in their diameter. At the same time certain alterations take place in the amount and character of the glandular secretions, possibly depending upon the irritation of the condensing connective tissue surrounding them.

In the second stage, the hairs become thin, and this is particularly noticeable in the thickest and woolly hairs, whose roots are situated deeply among the condensing tissue. In the first stage of the affection, the whole head is equally affected, and the hair becomes equally thinned throughout. In the second stage, it is the vertex and forehead which are most severely affected, and, while the sides remain stationary, the disease-process goes on in these localities. By the slow and gradual destruction of the nerve-fibres by the condensing connective tissue, the relative sensibility of the skin is much diminished in the affected parts, but without pain.

In the earlier stages of the disease, Dr. Pincus recommends the use of a solution of caustic potassa or soda, one part to two hundred and fifty or five hundred of water, or sodii carbonas, four parts to one hundred to two hundred, or sodii bicarb., four parts to fifty to one hundred and fifty. Of these solutions, two or three tablespoonfuls are to be rubbed into the head for several minutes, at first daily, afterwards oftener. Unfortunately, the prolonged use of this remedy, although of great service, yet has the drawback that it discolors the hair. If it is wished to avoid this, a solution of iodide of potassium, one or two parts to one hundred, will act favorably, though not so rapidly as the former.

In the latter stages Dr. Pincus uses stronger solutions of these alkalis, with a very weak solution of corrosive sublimate, one part to seven thousand five hundred. He has used all the various irritating and astringent washes, oils, and pomades, without success. X.

CROTON-CHLORAL HYDRATE.—Dr. Weill (*Bull. Gén. de Thérap.*, March 15), who has been making investigations upon this substance, concludes as follows: Croton-chloral hydrate is a hypnotic like chloral; usually in a smaller dose. It exercises an especial action upon the sensory cranial nerves. In a moderate dose it has not the same action upon the movements of the heart and upon the tonicity of the muscles, nor does it diminish respiration or reduce the temperature to the same extent as chloral. In excessive doses it causes death by arrest of respiration. The lesions observed after death in animals consist in an intense hyperæmia of the meninges, particularly those of the encephalon.

Its therapeutic employment is indicated: (a) in neuralgias of the trifacial; (b) in other neuralgias and against the phenomena of pain in general; (c) in spasmodic affections of the nervous system; (d) when the use of chloral is not safe on account of disease of the heart; (e) to calm the cough in certain chronic affections of the respiratory tract; (f) to procure sleep.

The contra-indications to its employment are an inflammatory condition of the digestive tract, and a predisposition to encephalic congestions.

Its taste is more disagreeable than that of chloral, and it is absolutely necessary that it should be masked by some corrigent; extract of liquorice seems to be the most appropriate. It cannot be administered hypodermically.

As to the dose, M. Weill says, "If it is only desired to

procure sleep, seven to fifteen grains will be sufficient in the great majority of cases; that is, if the suffering is not so severe as to render a large dose of some narcotic absolutely indispensable. In this case, thirty, forty, or sixty grains may be administered at once, and even more if necessary. In case of neuralgias, the English method is applicable, one, two, four grains repeated every quarter-hour, half-hour, or hour until relief is obtained, and it is often astonishing with what rapidity this result ensues." X.

EPIDEMIC PAROTITIS.—Dr. S. Pollack (*Wien. Med. Presse*, March 21) has had an opportunity for the first time in twenty-eight years' practice of observing this interesting pathological occurrence. Inflammation of the parotid, usually occurring only sporadically or as a sequel of some previous acute infectious disease, as scarlatina, was here observed quite isolated, as an epidemic.

More than sixty cases came under Dr. P.'s care in the course of six to eight weeks. The disease chiefly attacked children and youth of both sexes and in all classes; appeared in several families upon the same day, attacking usually individuals only. The intensity of the attack varied. In some cases the swelling was moderate, in others, as large as the fist, preventing chewing or opening the mouth, and causing much pain. When an examination could be made, the tonsils and isthmus faucium were found intact. Fever only occurred in the severer cases. The duration was from three to eight days, ending in resolution. No other symptoms were present, and scarlatina did not appear at any time. The treatment consisted simply of rest, with hot or cold applications, as the case required. X.

BACTERIA IN NORMAL BLOOD.—Dr. Kolaczck (*Centralblatt für Chirurgie*, No. 13, 1875) has repeatedly found Bacteria, such as are considered to be characteristic of certain diseases, in normal blood. Under a power of from one thousand to fifteen hundred diameters, certain diminutive round bodies are observed, having sharp contours, and somewhat refractive. They are sometimes arranged chain-fashion, usually two together, occasionally three, and maintain a rapid oscillatory and migratory motion, while the blood-corpuscles and their molecular derivations in the same field remain perfectly quiet. Two of the minute globules are sometimes joined together so as to look like a single one, and occasionally a couple of these double spheres join, to form a rectangular figure, possessing the above-mentioned peculiar movements.

Kolaczck's experience in the study of Bacteria leads him to class these globules as Bacteria or micrococci, and he therefore concludes that either Bacteria are found in all blood; or that, in spite of every precaution, certain of these minute bodies enter the preparations from the external air. He thinks that it is possible they may be introduced in the food, and has examined the excretions with great care, in order to see if they could be discovered in these.

The urine was examined by passing the stream, towards the end of its voidance, into a reagent-glass which had been cleaned with solution of potassa and sulphuric acid and boiled in absolute alcohol. From this it was immediately drawn by a tube prepared similarly, and of which the closed capillary end had just been broken open, while the other end was stuffed with cotton. It was then examined on a slide, and with a cover prepared in like manner. The result showed micrococci, which could no more have been imported from the air than those found in the blood. Dr. K. purposes undertaking further researches upon this subject. X.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

THE MEETING-PLACE OF THE AMERICAN MEDICAL ASSOCIATION IN 1876.

AS is well known, the medical profession of Philadelphia, through some of its most representative men, partially invited the American Medical Association to meet at this place next year. This, under the circumstances, is so eminently proper that we believe it has been acquiesced in generally, and, if we are not misinformed, throughout the country the members of our profession look forward towards visiting Philadelphia during the Centennial. Since last year, however, the idea of a Centennial Congress has ripened into the action of which we take note in another column, and, if Dame Rumor be not a liar, it is intended, by some of those who are supposed to be especially powerful in this city and in the American Medical Association, to sacrifice the latter to the supposed interests of its foreign sister. Confirmation of this rumor is furnished by the fact that neither of our learned societies has as yet taken any official action in regard to inviting the American Medical Association here.

Since the Association has refused to recognize the College of Physicians,—the society to which of all others it owed its origin,—it is not to be wondered at that the College observes a dignified silence; but it is astonishing that the County Medical Society has not ere this passed a formal resolution of invitation. To our thinking, it is already committed to such action, and if it does not go on in the work it will

stultify itself and the profession of Philadelphia before the country.

It is not necessary here to repeat the very obvious reasons there are for holding the meeting of the Association in this city in 1876. Our readers are neither blind nor foolish. It may be worth while to say a few words in regard to the reasons probably assigned by those who are said to be planning to get New York appointed as the place of session.

In the first place, it is affirmed that the regular meeting-time of the Association is such that our whole city will be in 1876 just then swallowed up in the confusion and tumult incident upon the opening of the Centennial. This is readily met by altering the time of meeting to June or some other month.

In the second place, it is stated that it will not do to have two associations meet here at one time. Of course not; but is there not more than one week in the year?

Again, it is objected that delegates will not come twice to the same city, and that at any rate the city will all summer long be so crowded as greatly to inconvenience both visitors and hosts. Of course our city will be crowded; but it is to be hoped our hospitality will be sufficiently elastic to embrace all who come, and we have no doubt that, if no other shelter offers, the profession in their private homes can afford sufficient protection from the storms of midsummer.

There is, of course, some force in the obvious difficulties in the way of meeting; but, not to occupy too much space with this discussion of the matter, it appears to us that all these difficulties would be avoided by leaving the time of meeting for 1876 to be fixed and announced by a local committee, it being understood that they should so arrange that the sessions of the American Medical Association should terminate on a Friday or Saturday and those of the Centennial Congress should commence on the subsequent Monday. No one will be able to exhaust the great exhibition in the afternoons of a single week, and delegates to the first association could readily hold over for the second.

ALMOST A MURDER.

THERE has recently happened in Scotland a curious case of suspected murder, involving such nice points in medical jurisprudence, and illustrating so forcibly the necessity and value of trained experts, as to justify a sketch of it in this place. As the result of such a transaction in this country, where physicians are so often selected by the gov-

ernment because they know nothing about what they are called to investigate, the innocent victim of circumstances would very probably have been hung, or at best involved in an anxious trial, with, likely enough, professional episodes as disgraceful as those which so often adorn our important criminal court proceedings.

A lad, whilst passing along a street in Edinburgh, about one A.M., September 24, 1874, stumbled over the still warm, half-naked body of a man, lying with extended arms across the footpath. The police, being summoned, found that the man had evidently fallen or been thrown from a still open window in a third story. Entering the house, they ascended to the room, and, striking a light, found a second man in the bed, wrapped in the bed-clothes, and, as they thought, feigning sleep. The landlady of the house had already informed them that two men occupied the room together; that one of them, named Stoddart, had been in Australia, and had subsequently become insane, and that the two had quarrelled seriously a day or two before. On shaking Stoddart, he awoke, and denied any knowledge of the whereabouts of his comrade, stating that they had made up their disagreement, and had both gone to sleep sober the night previous.

The pillow of the bed was spotted with blood. The hands of Stoddart seemed damp, as though recently washed, and on one of them were an abrasion and some spots of blood. From the bed to the window was a continuous line of spots, gouts, and pools of blood, and lying in one of the latter was a case-knife covered with blood. The police, believing that Stoddart had either thrown his companion from the window or had attacked him so violently that he had leaped from the window, arrested him, and locked up the room.

Dr. Joseph Bell, who, in the absence of the official medical officer, Dr. H. D. Littlejohn, was first called to the case, decided against the theory of murder, because he believed that the peculiar spotting of the bed-clothes was such as could only have been produced by the spray of a sudden violent cough or sneeze. There were several wounds on the head, but these he decided to be not cuts with a knife, but lacerations due to the fall. He thought that the deceased had been seized with a hemorrhage from an aneurism or from a phthisical lung, awakened with the violent cough of strangulation, rushed to the window, and inadvertently leaned out too far.

The police did not accord in opinion with Dr. Bell, but Dr. Littlejohn, on inspecting the apartment, came to the same decision as the first professional expert. Taking advantage of a fact pre-

viously noted, that spots of blood not visible by daylight become apparent by candle-light, he was enabled to determine that a spray of blood had been thrown upon the wall-paper as well as upon the bed. At the autopsy, the chest, abdomen, windpipe, throat, cervical spine, and cranium were successively examined, but nothing found that could in any way be considered as having been before the fall a source of hemorrhage into the air-passages. Instead of giving the matter up, the physicians finally removed the upper maxillæ, when it was found that the left middle turbinated bone had its mucous membrane ruptured in two places about the size of millet-seeds; in these openings there were minute coagula. As it was ascertained from the relatives of the deceased that he was subject to violent epistaxis, and as a neighbor was finally found who, looking out of the opposite window, saw the man flash past and heard the yell and the heavy thud on the pavement, and who was absolutely certain that there was no noise or struggle in the room, to which her attention was drawn by the open window, the police were finally satisfied, and the prisoner was discharged, fairly freed by expert skill from a most embarrassing position.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting, held Wednesday, February 10, 1875, at 8 o'clock, P.M.,

VICE-PRESIDENT, DR. EDWARD WALLACE, in the chair,

Dr. W. T. TAYLOR presented the following history of a case of obstruction of the bowel:

"On Thursday morning, February 4, 1875, about two o'clock, I was called to see P. R., a German, aged 71 years, who was suffering with pain in the bowels, in the left iliac region, attended with some sickness of the stomach. For a year past he had been occasionally affected with bilious colic, followed by jaundice, so that I thought the present attack was similar, and gave him an emetic to empty the stomach, followed by an anodyne carminative.

"On making my morning visit, I found that the vomiting had continued at intervals, and that he had ejected a considerable quantity of a greenish liquid of an intensely-bitter taste, but the pain had not abated. The anodyne was continued, and lime-water, with milk-punch, administered, together with a purgative containing blue mass, podophyllin, ext. hyoscyam., and ext. colocyn. comp. I also applied a sinapism to the abdomen. He had some fever, a furred tongue, and a full pulse.

"As the purgative had not operated during the afternoon, I gave an injection of castor oil and molasses with warm water, followed by large injections of warm water and soap, but they came away with very little fecal matter. As the soreness had not subsided in the left iliac region, one dozen leeches were applied, and the abdomen covered with a warm mush-poultice; he also took one grain of blue mass and one-half grain of opium every two hours. The pain diminished somewhat during the night, but the sickness and vomiting

occurred at intervals of from one to two hours, and the ejecta had a perceptible stercoraceous odor; the bowels had not been opened.

"On Friday, February 5, Dr. R. Stewart saw the case with me, and we added one-half grain of ext. belladonna to the pills of blue mass and opium, which were continued as before. An injection of castor oil and turpentine with ten drops of croton oil was given, with no better effect. The fecal vomiting still continued as before. In the evening I gave very large injections of castor oil and thin gruel, as much as could be thrown in the colon: the warmth was agreeable to the patient, but did no other good. The vomiting continued at intervals until his death, which occurred on Saturday morning at seven o'clock.

"On making a post-mortem examination, I found the body well nourished, containing a large quantity of fat in the omentum and mesentery. The stomach and bowels were empty until I reached the ileum, where a semi-solid mass of the size of a large horse-chestnut was found, resembling it also in color. Above this mass the intestine was of its proper calibre, but below it was quite small, and paths of inflammation extended upwards some twelve or eighteen inches towards the jejunum. With this exception, the bowels were completely empty, both above and below the obstruction. I did not discover any inversion of the bowel, as I expected, nor any hernia, but was much surprised on examining this mass to find it was fecal matter with a central nucleus."

The fecal mass was referred to the Committee on Microscopy. The Chairman, Dr. Tyson, reported as follows:

He had examined the concretion, and found it composed of numerous concentric layers of fecal matter, with a small nucleus of a harder shell-like material, probably derived from the food. In this respect it corresponded with the concretions which are a well-known cause of fatal peritonitis, and which are never the cherry- and date-stones which in external configuration they so closely resemble, and with which they have been confounded. He had recently made three post-mortem examinations where these concretions were the cause of death, and in each instance they exhibited this structure. Only a short time ago he had met a statement of Sir William Jenner, from the Chair of the Pathological Society of London, to the same effect, that these concretions were always fecal matter with a nucleus. In this instance, however, the concretion was larger, at least an inch in diameter in the dry state, very stinking, and clearly fecal matter. A section exhibited with beautiful distinctness the laminæ entering into its composition, and the successive layers could be easily removed. The entire mass was exceedingly friable.

Dr. J. G. HAMILTON then read a paper on the "Diagnosis, Prognosis, and General Management of Typhoid Fever."

Dr. STETLER asked the doctor whether he recommended three or four grains of quinia every three or four hours during the twenty-four: if so, he thought it was too much for tonic purposes. He would not be willing to give it in such doses in typhoid fever, for fear of increasing the trouble in the bowels. When attending the Pennsylvania Hospital, about twenty years since, where this disease was very successfully treated, not more than eight or ten grains were given per diem.

Dr. HAMILTON said the paramount importance of sleep was obvious, and therefore he was in the habit of discontinuing the doses of quinine or other ordinary tonics during the night, and thus the amount of quinine given in twenty-four hours would not be large. If the bowels were loose, opium or any other preferable medicine should be given.

Dr. WELCH remarked that perhaps the gentleman who

last spoke might not be aware of the extent to which quinine is used in the treatment of typhoid fever in Germany. He (Dr. W.) proposed to show that the doses recommended by the author of the paper just read, instead of being large, are indeed small in comparison with those administered in the hospitals at Kiel and Basle, and perhaps at other places also in Germany, where the so-called antipyretic treatment has been adopted in the treatment of all febrile affections.

It has been found that quinine, when given in large doses, will reduce the temperature of the body; and, acting upon the theory that typhoid fever produces death by reason of the long-continued high temperature of the body, some German practitioners have conceived the idea of administering quinine in the treatment of that disease in what they would style antipyretic doses. In order to obtain the desired result, quinine is used under the guidance of the thermometer; that is to say, if the temperature reaches or runs above 102° Fahr., quinine is given in sufficiently large doses to reduce the temperature to nearly the normal standard. To accomplish this, Liebermeister states that from twenty-two to forty-five grains are ordinarily required, all of which must be taken within half an hour, or, at the most, one hour. Liebermeister's method is to administer seven and one-half grains every ten minutes, until the desired amount is taken. It must be borne in mind that the object in view is to make a positive impression upon the nerve-centres, which cannot be done by quinine if given in smaller doses and at longer intervals. If the first dose does not sufficiently reduce the temperature, the next one is increased; or, on the other hand, if the first dose reduces the temperature to 98.5°, or below, which Liebermeister says is not a very uncommon occurrence, then the next dose is diminished. He also states that in order to maintain the good results of quinine it is necessary, as a rule, to repeat the dose every second day.

The same writer also describes another means employed in the hospitals referred to with the object of lowering the temperature of the body, and that is the so-called cold-water treatment. This consists in subjecting the patient to cold baths of 68° Fahr. Each bath is of about ten minutes' duration, and they are repeated, in severe cases, as often as every two hours, so that not unfrequently twelve such baths are administered within twenty-four hours, and as many as two hundred and over in the course of a very severe attack of typhoid fever. It is said, however, that in the majority of cases a much less number of baths will be required, especially if antipyretic drugs are made use of at the same time; as, for instance, four to eight per diem, and from forty to sixty in the aggregate, will ordinarily be found sufficient. Of course the thermometer serves here, as in the treatment by quinine, to show the length of time the lowered temperature is maintained. As soon as the temperature rises to 102.2° in the axilla, or 103° in the rectum, the cold bath is repeated.

The statistics of Liebermeister seem conclusive in proving the superiority of this treatment over what he calls "indifferent treatment." He shows that in the hospital at Basle, where of late years the antipyretic treatment has been energetically and systematically applied, the rate of mortality from typhoid fever has been reduced two-thirds. This, surely, is a very large reduction of the death-rate; so large that it seems incredible that it should be wholly due to the course of treatment pursued.

There is one very important point in connection with the treatment of typhoid fever which the author of the paper read to-night omitted to mention, and that is the disinfection of the stools as a means of preventing the spread of the disease. It is now generally admitted

that the discharges from the bowels of typhoid-fever patients contain the germs of the disease. This being true, the importance of thoroughly disinfecting the stools before they are emptied into a privy-vault or a similar place, where a rapid reproduction of these germs may take place, cannot well be over-estimated.

Dr. STELLER, in reply to Dr. Welch, said he had not heard that these large doses of quinine—forty to fifty grains per diem—had been tried in Philadelphia in the treatment of typhoid fever, and he hoped they never would be. He granted that you might reduce the temperature for a time by overwhelming doses of quinine, but he feared the effect, and preferred the old treatment to such hazardous methods.

Dr. W. R. BLACKWOOD stated that he had used quinia in a large number of cases, and had never seen injurious effects from its employment. In the South, during and since the war, he gave it frequently in doses as high as eight grains every three hours, with decidedly beneficial results. He did not administer it at night, but relied more upon food and alcoholic stimulants. He believed that rest and sleep were of more service at night than medicines.

Dr. C. F. WITTIG said that in his day, in Germany, they gave no quinine in typhus, while the infusion or decoction of Peruvian bark, occasionally combined with valerian root or serpentaria, was frequently employed to combat nervous disturbance. Entero-typhus, together with pneumo-typhus, belongs to a family of diseases that are caused by miasmatic agency. In the latter, the cerebral nerves as well as the respiratory mucous membrane are especially affected; in the former, the principal action of the poison is on the spinal marrow and the abdominal ganglia. Intermittent fever, in which the exhibition of quinine is so beneficial, being likewise a zymotic disease, we may readily infer the usefulness of the remedy in entero-typhus; in both of which it seems to counteract reflex action. The disease under discussion is therefore no mere enteritis (according to Broussais), but a poisoning of the blood, with intestinal irritation, the treatment of which requires the eliminating method, with due consideration of the local intestinal symptoms and the support of the vital forces.

Dr. W. T. TAYLOR remarked, in regard to the diagnosis of typhoid fever, that there might be languor, headache, epistaxis, pain in the stomach, and diarrhoea, but there is only one positive and characteristic sign,—the rose-colored spots, which, according to Louis, Wood, and other writers, may be few or many, scattered over the abdomen or breast. As smallpox, scarlet fever, and measles are distinguished by their eruption, so enteric or typhoid fever is known by its spots. In the treatment, medicine may be omitted during the night, but food and stimulants must be given at intervals to sustain the patient. The lecturer did not speak of the injurious effects of impure milk. He had not seen in his own practice any injurious effects that he could attribute to milk.

Dr. HAMILTON, in reply to Dr. Taylor, said he thought the regular use of food, and perhaps stimulus, was often imperative night and day. The more distinctive characteristics of the eruption in typhoid and typhus were alluded to in the paper. In perhaps one-third of his cases he had failed to discover any eruption.

Dr. ATKINSON asked whether he thought the fever could be aborted.

Dr. HAMILTON said he thought not.

Dr. STELLER asked Dr. Hamilton whether the prodromes are not the best signs to aid us in making an early diagnosis, and the other symptoms as they are developed mainly confirm it. He thought we could not hold the diagnosis in abeyance until the appearance of the rose-colored eruption. This, although very characteristic, does not always manifest itself. Most practi-

tioners are compelled to make a diagnosis before this period, except in very rare and obscure cases.

Dr. HAMILTON remarked that all the usual symptoms of continued fever could exist and give ground to regard the disease as typhoid, and yet it might not be of this character. The appearance of the eruption peculiar to the affection would remove all doubts more effectually than any other single pathognomonic symptom of the disease.

Dr. ESHLEMAN remarked that typhoid fever occasionally sets in as an intermittent. In this form he pushes the quinia, but when cut short he is unable to say positively that the case was typhoid. When we fail to abort this form, the case is positive against the assumption. We do meet with cases in children that yield to ordinary treatment, with or without quinia, in the course of a week, which we cannot well classify except as typhoid.

He is in the habit of stimulating freely when the pulse grows frequent and feeble, and when he finds stimulants to lessen the frequency and increase the force of the pulse. For the purpose of preserving the blood he gives, early in the disease, scruple-doses of the bisulphite of sodium, thrice daily. He gives turpentine early, with the effect generally of warding off the dry and chapped tongue. He likes the effects of cool-water sponging of the extremities. He does not regard typhoid fever in private practice in our city as at all fatal: though the temperature rises to 106° or 107°, the patient recovers.

SELECTIONS.

NAUNYN ON THE PRESENCE OF SUGAR IN NORMAL BILE.—At a meeting of the Königsberg (Prussian) Verein für Wissenschaftliche Heilkunde, held on March 9, 1874, Herr Naunyn made some remarks on his discovery that sugar is present in the normal bile of rabbits. In all the animals in whom he had made biliary fistulæ, he had invariably found sugar in the first drops of bile which escaped,—a proof that it must actually exist already in this secretion. The quantity of sugar in the bile secreted afterwards was, however, found to undergo a progressive increase. The importance of these facts in relation to vital (? normal) glycogenesis was also discussed, but the report in the *Berliner Klin. Wochenschrift* (No. 2) for January 11, 1875, does not mention the conclusions of Herr Naunyn:

[No mention is made of the tests employed, or of the precautions to avoid fallacies. At present the results of Dr. Wickham Legg's experiments stand in apparent contradiction; unless, after injury of the medulla oblongata, all the sugar escaped in the bile, instead of appearing in the urine.]—*W. Bathurst Woodman, M.D., in London Medical Record.*

SLOWNESS OF PULSE.—Mr. Pugin Thornton lately brought before the Clinical Society a case in which the pulse had at one time beat only 16, and for some weeks did not reach higher than 24 per minute. The patient was a young married woman, upon whom, in 1872, Mr. Thornton performed tracheotomy for syphilitic laryngitis. Her pulse at the time of the operation was 40, and it was not until six weeks later, when the tracheotomy-tube was removed, that the extraordinary slowness of her pulse was noticed. This infrequency had been accompanied by transient attacks of an epileptiform character. It appeared that in the summer of 1870 she was first seized with these fits, which at that time happened daily for about two months, the pulse averaging about twenty-four pulsations per minute. The woman, at the present time, is in good health, her pulse being constant at 48; but she is still periodically

obliged to take iodide of potassium to stop the recurrence of the laryngitis, which occasionally threatened. Mr. Thornton could not account for the curious phenomena, unless that the pneumogastric nerve might be presumed to be in some way affected by the specific poison.

Mr. Callender said that in some cases of slowness of circulation the patient seemed to suffer from cold; but he had a patient recently in St. Bartholomew's who had a pulse of 32 only, whilst a more robust man there could not be. Another member stated that in one of the earlier volumes of the *Medico-Chirurgical Transactions* there was a case recorded in which the pulse ranged from 25 to 7. At the post-mortem the foramen magnum was so contracted that it would hardly admit the tip of the little finger; and there was hypertrophy of the superior cervical ganglion of the sympathetic nerve. Dr. Symes Thompson remarked that the late Mr. Hodgson had a pulse which rarely exceeded 32, and used to draw attention to the fact that a slow pulse might exist for years without the production of any manifest symptom.

Dr. Archibald Hewan informed the Society twenty years ago his pulse was 72. After great study it was found to be 55; from that point it had gradually decreased. Eight years ago it was 24. Then Dr. B. Sanderson traced it with the sphygmograph. He had never had a fit nor fainted, and could bear cold well. He had lately climbed a mountain several thousand feet high, and his pulse at the top was 40. His urine had not altered in any way; his digestion was very good, and he was in good health. Dr. Althaus said that Napoleon the First had a slow pulse, and always felt uncomfortable, except in the excitement of battle, when it would rise to 60. Dr. A. Hewan mentioned that he had had rheumatic fever eight years ago, when his pulse did not rise above 32. Eight weeks ago he had gout and rheumatic pains, when his pulse quickly rose to 64 and 68, and then fell slowly to 32 and 28, at which it stood at present.—*The Doctor*.

GLEANINGS FROM OUR EXCHANGES.

PLUGGING THE VAGINA IN PLACENTA PRÆVIA.—The *Irish Hospital Gazette*, March 15, contains an abstract of a series of papers by Prof. Charpentier, which have appeared during 1874 in the *Archives de Tocologie*. Dr. C., after giving a historical sketch of the condition and the various theories which have been advanced for the purpose of explaining it, gives considerable space to the question of treatment. He looks upon the plug as the treatment *par excellence*. It requires to be applied skilfully to be of any great use. Charpie or tow is the best material with which to plug, and, if properly applied, the author considers such a plug superior to any description of india-rubber bag which can be introduced into the uterus and inflated. The great point to attend to when plugging is to introduce enough of the charpie or tow, as much as a pound and a half of the former material being sometimes necessary. The bladder and rectum should both be emptied before we proceed to plug. Some practitioners dip the first pledget in a solution of perchloride of iron. This is not necessary. The charpie should be rolled into small balls, the first twenty or thirty of which should have small pieces of thread attached. Before being introduced they should be well covered with cerate. This renders a speculum unnecessary. The author lays great stress upon packing tightly the anterior and posterior cul-de-sac, but especially the latter. The success of the operation depends to a great extent on this being well done. The vagina itself should be filled with the small pledgets

until they appear externally. Then a handful or more of dry charpie is to be applied, and over that three or four compresses, the whole being fixed by a T-bandage. If this plug be well applied, there can be no hemorrhage. If the charpie at the vulva become moist, it is a proof that the plug is badly applied, and it should be removed at once and reapplied. To be of much service, the plug should be left in from twelve to twenty-four hours.

ON THE EXCRETION OF NITROGEN IN THE URINE.—Dr. I. Byrne Power (*Dublin Journal of Medical Science*, February) thinks that Dr. E. Reynolds's paper on the method and importance of estimating the total nitrogen in the urine has not met with the attention it deserves. The quantity of nitrogen excreted as urea has heretofore been taken, if not as an absolute, at least as a relative measure of the entire nitrogenous urinary excretion resulting from waste of animal tissue.

That it is not so was shown by Dr. Reynolds, who called the nitrogen present in the urine, otherwise than in the form of urea, "residual." Dr. Power gives the method devised by himself for ascertaining more accurately the point at which, in Liebig's method, the mercuric nitrate has decomposed all the chlorides and begins to precipitate the urea. He then adds a table of analysis of urine, made by himself, using his improved method of estimating the urea in connection with Dr. Reynolds's plan for ascertaining the residual nitrogen. The results of these analyses show residual nitrogen in eleven cases, in amounts showing a ratio of $\frac{1}{15}$ to $\frac{1}{8}$ of the total nitrogen. It would seem, therefore, advisable to employ this method in future, if it is desired to find the exact amount of effete nitrogenous matter eliminated by the kidneys.

TRAUMATIC RUPTURE OF LEFT COMMON FEMORAL ARTERY; LIGATURE OF THE TORN ENDS; RECOVERY (*British Medical Journal*, March 6).—A collier, while assisting to push some trucks up a steep incline, was violently exerting himself, when he heard a snap in the left groin. This was followed by pain and a small pulsating swelling. He, however, continued at his work some days, after which he consulted a surgeon, who treated him without relief. At the end of a month the swelling was about the size of two fists, but not growing. Getting no better, he was taken to the Manchester Royal Infirmary. On the way, the swelling suddenly increased, and became enormously distended, reaching, on admission, upwards beyond Poupart's ligament, and downwards nearly to the knee. The diagnosis of ruptured artery was made, and after the administration of chloroform and the application of an aortic tourniquet, an incision in the line of the femoral artery was made. Large clots were cleared out, and the ends of the torn artery were discovered at least an inch apart; these were secured by catgut ligatures. The vein was intact. The edges of the wound were brought together by metallic sutures, and the wound dressed with dry lint, and the limb wrapped up in a flannel bandage.

The patient made an uninterrupted recovery, and was discharged, cured, at the end of six weeks.

TRAUMATIC TETANUS SUCCESSFULLY TREATED BY CHLORAL HYDRATE AND BROMIDE OF POTASSIUM.—Dr. W. E. Pitman communicates to the *Virginia Medical Monthly* for March a case of a child five years of age, in whom violent tetanic spasms, clinched jaws, marked tendency to opisthotonos, with some dysphagia, came on suddenly (presumably as a result of some wound, although Dr. P. does not state this). Chloral hydrate, gr. v, with bromide of potassium, gr. xii, were administered every two hours, gradually lengthening the intervals, until spasmodic movements ceased. The child recovered.

EXCISION OF THE HEAD OF THE RIGHT HUMERUS FOR CARIES, THE RESULT OF AN INJURY.—Surgeon-Major J. H. Porter reports the following case (*Dublin Journal of Medical Sciences*, February): A soldier, aged 21, received, early in 1871, a blow from a broom-handle on the right shoulder, which caused him severe pain, and from which he frequently suffered afterwards. In July, 1873, he fell on the same shoulder, which was followed by severe inflammation in the part, with supuration and formation of an abscess in, or in the neighborhood of, the joint, which was opened in November.

When he arrived home from Bermuda, December 1, he was pale and emaciated, temperature 102° , pulse 105, and suffering from profuse night-sweats. The right shoulder was flattened, and presented the appearance of a dislocation of the head of the humerus, forward. There was a sinus at the inner edge of the biceps from which healthy pus was discharged. A probe could be passed through the sinus to the acromion process, but no bone could be felt. It was evident, however, that the head of the humerus was diseased and displaced. All interference with the arm caused intense pain in the shoulder.

On the 1st of January, 1874, excision of the head of the humerus was performed by a vertical incision of about five inches in length, extending from a point midway between the acromion and coracoid process, down the arm, parallel to the fibres of the deltoid muscle. The capsule of the joint and long head of the biceps were found to be extensively diseased, and the head of the bone in an advanced stage of caries. Two inches of bone were removed by butcher's saw. There was but little hemorrhage. The wound was dressed from the bottom with lint saturated with a weak solution of carbolic acid; a conical pad was placed in the axilla to prevent the end of the bone pressing inwards, and the fore-arm was carried across the body supported in a sling. As soon as the inflammation consequent upon the operation had subsided, passive motion was commenced by gently moving the elbow backwards and forwards for two or three minutes daily.

The progress of recovery was slow, and was retarded by the formation of numerous abscesses and an attack of phlegmonous erysipelas, during which a deep incision was made in the back of the arm. Through this opening the discharge of pus was encouraged, the first wound being closed, and after this he rapidly recovered. At present he can use a fork or spoon to assist in passing food to his mouth, can brush his hair, place his hand at the back or top of his head or on the opposite shoulder, and can carry the fore-arm across the back. He can also "present" a rifle from the right shoulder. During the course of the treatment the galvanic current was applied over the deltoid muscle, with much advantage.

HYDROCELE IN A FEMALE (*Southern Medical Record* for February).—Dr. G. A. Baxter was called to see a woman, married, 32 years of age, who gave the following history: Two years previously, while lifting a heavy bucket of coal, she felt a sharp pain in the inguinal region, but it passed away in a few moments. A few days afterwards she experienced some pain in the same region, extending into the labia majora, and accompanied by swelling. This continued some days longer, when, upon lying down one day, the swelling and pain suddenly disappeared almost completely.

The tumor continued in this condition for nearly two years, when, on some occasion having fallen over a chair, the labia majora was bruised, and the tumor began to increase in size, without, however, giving any

pain. On examination by Dr. B., a tumor was found as large as an egg, with its apex pointing to the external inguinal ring, and its base large and bulging out the upper portion of the labia majora. The tumor was at first supposed to be a hernia, then an abscess. Under the latter supposition, it was opened, when, instead of pus, serum alone came out. Speedy recovery followed.

HYDROPHOBIA.—Dr. J. G. Janeway, U.S.A., communicates to the *New York Medical Record*, March 13, an account of several cases of skunk-bites. The details of these are confirmatory of the views expressed by the Rev. H. C. Hevey in a recent number of the *American Journal of Science and Art*,—namely, that the malady produced by the mephitic virus is simply hydrophobia. Dr. J. gives notes of five cases of skunk-bites in which the period of incubation varied from twelve to twenty-one days, after which the characteristic symptoms set in and were rapidly followed by death. In one case of skunk-bite which did not terminate fatally, Dr. Janeway attributes the patient's recovery to the administration of heroic doses of strychnia, combined with free and repeated cauterization of the wound. Commencing with one-sixteenth of a grain of strychnia every three hours, the dose was gradually increased, and it was not until it had reached one-half grain, given every three hours for six days, that the characteristic effects of the drug became manifest.

ON THE DANGERS OF INTRA-RECTAL EXAMINATION.—Dr. R. F. Weir, in an article on this subject in the *New York Medical Record*, March 20, relates a case occurring under his care, recently, where manual exploration was made use of in a case of intestinal obstruction, with the view of ascertaining the appropriate point for the operation of artificial anus. The hand was inserted to the depth of eleven inches. The operation was then performed, but the patient died within twenty-four hours. Post-mortem examination showed a rent of the intestine extending from the level of the sacro-iliac synchondrosis to the bottom of the cul-de-sac of Douglass, and involving the muscular and peritoneal coats. No force was supposed to have been used, the hand having been introduced with the greatest care.

RADICAL CURE OF HYDROCELE BY ELECTRO-PUNCTURE.—Ehrhard (*Betz's Memorabilien*, Heft 8, 1874) has employed electro-puncture with permanent good effect in four cases of hydrocele. He uses the interrupted current from a small Gaiffe's apparatus. In three of the cases the hydrocele was only of short duration, and absorption took place in from three to four days, without any reaction. The hydroceles had not been previously tapped. In the fourth case the patient was a man aged 52, who had had hydrocele eight years and had been tapped many times. Under the use of electro-puncture, absorption of the fluid took place in three weeks. Four months afterwards, there was no indication of a return of the malady.

INTERESTING CASE OF NEUROSIS.—Dr. James Martin gives, in the *Dublin Medical Journal* for March, a short account of a young woman seized with sharp pain darting from the ensiform cartilage to the sixth and seventh dorsal vertebræ, accompanied by extreme weakness and discoloration of the skin over the sternum, the latter gradually extending over the body generally, but with white patches on the arms and elsewhere. Under the influence of tonics the pain and weakness disappeared, while the general discoloration, with the exception of the dark-brown patch over the sternum, which faded entirely away, remained persistent.

POISONING BY COKE FROM ITS USE FOR DOMESTIC PURPOSES.—Dr. R. Torrance (*British Medical Journal*, March 6) was called to see two servants who had been

making marmalade in the still-room of a gentleman's house, over a coke-fire. They had been attacked by giddiness, headache, and vomiting, accompanied in one case by weight in the head, ringing in the ears, strong tendency to sleep, and loss of muscular power. Removed to another room, the breathing was observed to be stertorous and difficult, and the action of the heart feeble. Stimulants, frictions, fresh air, and hot bottles to the feet soon brought about recovery.

MISCELLANY.

DE MORIBUS GERMANORUM.—We find in a recent book* the translation of a document which throws a singular light upon the moral condition of the Empire of Germany. This is a petition presented to the Reichstag, March 30, 1869, by the Central Committee of the German Evangelical Church, and referred to Bismarck. For the edification of our readers, we have copied some passages from it *literally*:

"There are very few of the streets of Berlin, even among those most frequented by the higher class, which are not infested by houses of prostitution. . . . In every quarter of the capital speculation has opened notorious markets to immorality. . . . The number of women placed under the surveillance of the police amounts to 71,319.† . . . In the course of last year (1868) the bodies of 154 infants were found in Berlin alone; . . . and these figures represent only a very slight proportion of the infanticides committed in the capital in the course of one year. . . . The number of illegitimate children in Berlin last year (1868) amounted to 150 in 1000 births. At Munich, during the same year, the births outside of marriage were in the proportion of 500 to 1000.

"In Magdeburg, there is not a street, perhaps not a house, which is not the asylum of lost women or of *racouleuses*. . . . In 1868, medical statistics ascertained 75,006 cases of syphilis for the entire city of Magdeburg (90,000 inhabitants). At Posen (50,000 inhabitants), without counting clandestine prostitutes, 1264 women were noticed by the police; that is to say, 1264 prostitutes and more among about 20,000 women, —16 per cent. In Stettin, among 85,000 inhabitants, of whom 20,000 were adult women, there were 2000 prostitutes,—*i.e.*, 10 per cent.; and this not inclusive of concubines and kept women. The provisions of the Prussian penal code no longer suffice; the police is debauched, and prostitutes of both sexes walk brazenly abroad.

"At Breslau (156,000 inhabitants), 1088 prostitutes; the sum of the sentences of imprisonment pronounced last year against prostitutes amounts to 5750 weeks, or more than 110 years. Dantzic (60,000 inhabitants) has 850 women placed under the control of the police. At Memel (19,000 inhabitants) 254 names of prostitutes are

found upon the books of the police, an abstract of the number of public prostitutes. At Königsberg houses of debauchery are established in almost all the streets. In Cologne (114,000 inhabitants) there are 200 registered prostitutes; but it is known that about 1000 others ply the same trade. In Leipsic (78,000 inhabitants) there are fifty-two licensed houses. In the duchy of Anhalt the number of illegitimate births is 12 per cent., and 18 per cent. in the duchy of Dessau. The police have had to give up all measures of repression. At Bremen (70,000 inhabitants) there are to be counted but 72 girls placed under the control of the police, but the number there of public and clandestine prostitutes is incalculable. At Hamburg (215,000 inhabitants) there are 189 houses of prostitution and analogous establishments.

"Doubtless there are localities where the primitive purity of morals may be found, but they are rare, and immorality has invaded alike the small cities and least villages. In the country the disease augments each day, because legitimate unions have become almost the exception; for in each commune one-half the births are illegitimate."

To complete the picture of the griefs of the Evangelical committee, we will add the slightly comical reflections of the Berlin police:

"Immorality is such a 'common thing,' bare-faced licentiousness covers with so much freedom the members of German society with its ignoble *bavures*, and women, married or single, have reached such degradation, that an honest man trembles before marriage, and seriously asks himself whether the woman to whom he offers himself is not a residue of lubricity, and whether he is not exposed to admitting to his bed merely a mass of rottenness."—*Annual Report*, 1867.

Madame de Staël says that love, in Germany, is a religion, but a poetic religion. According to the foregoing figures, among one hundred women this religion numbers, then, about ten priestesses living at the altar. The priests are not counted!—*St. Louis Medical Journal*; from *Le Progrès Médical*, January 23, 1875.

"THE CENTENNIAL MEDICAL COMMISSION OF PHILADELPHIA" has now been fully organized, by the election of the following officers:—*President*, Samuel D. Gross, M.D., LL.D., D.C.L. Oxon.; *Vice-Presidents*, W. S. W. Ruschenberger, M.D., U.S.N., and Alfred Stillé, M.D.; *Secretary*, William B. Atkinson, M.D.; *American Corresponding Secretary*, Daniel G. Brinton, M.D.; *Foreign Corresponding Secretary*, Richard J. Dunglison, M.D.; *Treasurer*, Caspar Wister, M.D.; *Executive Committee*, Drs. Washington L. Atlee, D. Hayes Agnew, Robert Burns, David Burpee, J. S. Eshleman, Albert Fricke, N. L. Hatfield, H. Lenox Hodge, W. H. Pancoast, Robert E. Rogers, J. G. Stetler, L. Turnbull, and Edward Wallace, and the officers.

Arrangements have been made to hold an International Medical Congress early in September, 1876, in Philadelphia, at which discourses will be read upon Medicine and Medical Progress in the United States, on Surgery, Obstetrics, Chemistry and Pharmacy, Ma-

* Les Odeurs de Berlin, Leouzon le Duc.

† Berlin has about 700,000 inhabitants: the number of adult women would be, therefore, in the neighborhood of 170,000. The proportion is beautiful!

teria Medica, Medical Jurisprudence and Toxicology, Hygiene and Social Science, Medical Biography, Medical Education and Institutions, and Medical Literature. The morning sessions will be devoted to general business and reading these discourses, while the afternoon sessions will be devoted to sections on Medicine, on Surgery and Anatomy, on Obstetrics, on Chemistry, Materia Medica, Hygiene, and Medical Jurisprudence, and on Ophthalmology and Otology. This congress will consist of delegates, native and foreign, representing the American Medical Association, the various State medical societies, and the medical societies of Europe, Mexico, the British Dominions, Central and South America, the Sandwich Islands, the East and West Indies, China, and Japan. The congress is to be organized by the election of a president, thirteen vice-presidents, seven of whom shall be natives and six foreigners; a recording secretary, two corresponding secretaries, a treasurer, an executive committee, and a committee on publication. It has been agreed that no vote shall be taken during the sittings of the congress upon any topic discussed or address delivered. The preparation of these discourses has been intrusted to able hands, and it is intended to publish them in an appropriate volume commemorative of the occasion.

NOT long since, *L'Union Médicale* directed the attention of its readers to the statement of Dr. Simmons as to the happy results, in cases of obstinate vomiting, of the administration by the rectum of chloral hydrate. Dr. Simmons recommended to begin with a dose of thirty *grains* morning and evening. By mistake, it was printed in *L'Union Médicale* thirty *grammes*,—an enormous difference. A subscriber not long after came to grief by administering per rectum half the quantity, fifteen grammes, to a hysterical patient.

A few minutes after the administration of the chloral the patient became completely collapsed, and remained in a state of unconsciousness, with constant tendency to syncope, for several hours. She was restored to consciousness with great difficulty by the persistent efforts of her physician.

Very naturally, the subscriber calls the attention of *L'Union Médicale* to its error. That journal replies that for a long time the *grain* has not been employed in French prescriptions, and by a misprint *gramme* was substituted for *grain*. It thinks the excessive dose thus recommended should have made readers cautious as to its exhibition.—*Boston Medical and Surgical Journal*.

NEW DISEASE IN BALLET-GIRLS.—At a meeting of the Society of Physicians in Vienna, reported in the *Wiener Medizinische Presse*, Dr. Schulz described a new form of disease which hitherto he had observed only in ballet-girls, and which manifested itself in a cramp of the muscles of the calf of the leg. It occurred chiefly among those who were in the habit of performing a *pas seul* on the points of the toes. The disease appeared to be similar in its character to writer's palsy. The muscle which is the chief agent in supporting the body upon the points of the toes is the flexor longus

pollicis. This position, which is accompanied by a rigidity of the whole limb, can only be maintained when the foot is supported by a shoe made for this particular purpose. This muscular cramp was relieved in all cases by faradization. Professor Patruban, in reply to this communication, stated that in his opinion it was "anatomically, physiologically, physically, and artistically" impossible that a dancer should stand upon the points of the toes; but that the sesamoid bone was the point of support. In proof of this view he referred to Hyrtl's lectures, and to the fact that Dr. Schulz had never had an opportunity to see the naked foot in this position.—*Boston Medical and Surgical Journal*.

THE NEW HÔTEL-DIEU.—According to *L'Union Médicale*, the changes in the original plan for the new Hôtel-Dieu are rapidly being carried out. They consist especially in lowering the roofs, whose excessive height cut off the air and sunlight from the courts and promenades intended for convalescents, and in the removal of one story from the two wings which front on the Quai Napoléon. And there is reason to hope that the inauguration of this new structure, certainly one of the most beautiful in Paris, will take place in the not distant future.—*Boston Medical and Surgical Journal*.

AMERICAN MEDICAL ASSOCIATION.—The Twenty-sixth Annual Session will be held in the city of Louisville, Kentucky, on Tuesday, May 4, 1875, at 11 A.M.

Tickets will be issued to delegates from Philadelphia to Louisville and return, for \$24, on presenting an order from the undersigned. Those who want orders should send a *stamp* and say which route they prefer, Pennsylvania Central, or Philadelphia, Wilmington & Baltimore.

WM. B. ATKINSON, 1400 Pine Street,
Permanent Secretary.

NOTES AND QUERIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held Wednesday, April 28, at 8 o'clock P.M., at the hall of the College of Physicians. Obituary notices of the following deceased members will be read: Drs. John Bell, M. M. Levis, L. S. Bolles, W. A. Hoffman, B. Price. The medical profession in the city are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 13, 1875, TO APRIL 19, 1875, INCLUSIVE.

EDWARDS, E. A., SURGEON.—Granted leave of absence for one month on Surgeon's Certificate of Disability. S. O. 71, Military Division of the Atlantic, April 14, 1875.

MOORE, JOHN, SURGEON.—Assigned to duty as Medical Director of the Department. G. O. 5, Department of Texas, April 13, 1875.

JAQUETT, G. P., ASSISTANT-SURGEON.—Assigned to temporary duty with Geologists' escort to the Black Hills. S. O. 44, Department of the Platte, April 13, 1875.

HOFF, J. V. R., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Sanders, Wyoming Territory, during temporary absence of Dr. Jaquett. S. O. 44, c. s., Department of the Platte.

SATURDAY, MAY 1, 1875.

ORIGINAL COMMUNICATIONS.

REPORT OF A COMMITTEE APPOINTED BY THE PATHOLOGICAL SOCIETY OF PHILADELPHIA TO EXAMINE THE SPECIMEN OF IMPERFECT-CYCLOPS MONSTER PRESENTED BY DR. F. H. GROSS.

Read March 11, 1875.

YOUR Committee beg leave to report that upon examination they found that the specimen was an example of the deformation known as the *ethmocephale* of Saint-Hilaire, the exact position of the specimen being, it was thought, in close connection with the cyclops group of monsters.

The body was that of a male child at full term. It presented nothing unusual apart from the head and face, to which your Committee's remarks will be confined.

FIG. 1.



VIEW OF THE HEAD BEFORE DISSECTION.

The forehead was much contracted from side to side, and presented a single frontal protuberance. The palpebral fissures were approximated, each fissure measuring five lines in length, and directed slightly downwards and outwards. The space between the eyes was nine lines in width, and was occupied by the base of the nose. The latter organ was the most remarkable feature of the specimen. It consisted of a tubular proboscis-like organ, which measured eleven lines in length along its upper surface, five lines in length along its lower, nine lines in width at the base, and five and a half at the tip. It was flexible, covered throughout with integument, presented a single sub-rounded nostril, having somewhat tumid margins, which, towards the middle, both above and below, slightly projected. The

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interior of this organ appeared to be a *cul-de-sac*, without communication with the mucous membrane.

The lips were well formed, the oral fissure measuring ten lines in length. The upper margin of the fibres of the orbicularis oris muscle was defined by a well-marked wrinkle. The space between this and the base of the nose was smooth, measured nine lines in height, and was continuous with the cheek-surfaces.

Upon removing the calvaria, it was found that the brain-case was not entirely occupied with the brain, the top of the cerebral hemispheres failing to reach the sagittal suture by one inch. Its appearance was, moreover, remarkable by the failure of the posterior cerebral lobes to overlie the cerebellum. The sides of the longitudinal fissure at its posterior part were widely divergent, disclosing the *velum*. The space not occupied by the brain was filled with a thin serous fluid. The dura mater sent no folds between the encephalic masses; so that the great falx and tentorium were absent. There was, of course, no longitudinal sinus.

When the brain was removed, the dura mater was seen lining the base of the skull in the usual manner, so far as the posterior and middle cerebral fossæ were concerned. That lining the anterior cerebral fossa presented a smooth surface, not interrupted by any eminence which would indicate the position of the *crista galli*. The transverse diameter of the anterior cerebral fossa was one inch and ten lines. There was no appearance of olfactory grooves or cribriform plate.

FIG. 2.



THE BRAIN VIEWED FROM ABOVE.

a, the cerebellum; *b*, corpora quadrigemina; *c*, probable position of the optic thalamus; *d*, the median sulcus; *e*, the occipital lobe; *f*, the first posterior transverse convolution; *g*, the first anterior transverse convolution; *h*, the parieto-occipital fissure.

Viewed from above (Fig. 2), the encephalon presented the following appearances: The cerebellum (*a*), corpora quadrigemina (*b*), and optic thalami (*c*) were exposed; the cerebrum terminating four lines in advance of the cerebellum. The cerebrum was imperfectly divided into two hemispheres. The longitudinal fissure was represented by a median

sulcus (*d*) measuring nine lines in length, which did not extend downwards to a corpus callosum, —this commissure being entirely absent; nor did this sulcus differ in any respect from those elsewhere seen on the cortex. The occipital lobes (*e*) were not approximated; indeed, it was by their want of approximation that the optic thalami and corpora quadrigemina were seen.

FIG. 3.



THE BRAIN VIEWED FROM BELOW.

a, medulla oblongata; *b*, pons Varolii; *c*, infundibulum; *d*, inferior median sulcus; *e*, fissure of Sylvius.

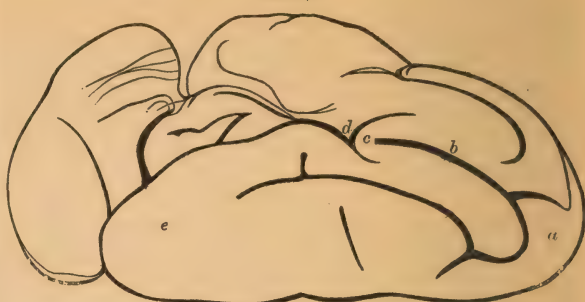
Viewed from beneath (Fig. 3), the encephalon presented a normal medulla oblongata and pons. There were no mammillary bodies. The under part of the mass, answering to the conjoined thalami, (?) presented a conspicuous infundibulum (*c*). The posterior perforated space was absent; the two anterior were conjoined into a central space placed in advance of the infundibulum. In front of the latter space was a median sulcus, measuring seven lines in length. The olfactory nerves were absent. The position of the optic tract was obscurely defined. No trace of a chiasm was seen.

The general aspect of the cerebrum led your Committee to determine the significance of its malformation to be as follows: that at an early period in the history of the foetus, at a time when the hemispheres were about to be discerned, the development of the mass was arrested. A decided attempt at a symmetrical division of its parts was announced, which, however, was not successfully attained in many parts of the cerebrum: thus a right and a left hemisphere were recognized, united by two conspicuous transverse convolutions in front, and by two shorter and less conspicuous convolutions behind. The superior median sulcus was terminated posteriorly by the first posterior transverse convolution. The first anterior transverse convolution presented upon its upper margin a pyramidal offset, which abruptly arose, and was lodged within the superior sulcus, bifurcating it in front.

In the right cerebral hemisphere the fissure of Sylvius began about a line above the level of the anterior perforated space, and ascended less than half the way up the side of the hemisphere. In

front of this fissure were the transverse convolutions, the fissure joining the sulcus between them. Behind it was a large smooth surface which answered pretty

FIG. 4.



PROFILE VIEW OF THE BRAIN SEEN FROM THE RIGHT.

a, anterior superior transverse convolution; *b*, superior median sulcus; *c*, the posterior superior transverse convolution; *d*, the parieto-occipital sulcus; *e*, the occipital lobe.

nearly to the posterior half of the hemisphere. The fissure of Rolando began at the anterior border of the superior median sulcus, with which it was continuous, and extended downwards and outwards to the end of the first anterior transverse convolution. The position of the parieto-occipital sulcus was marked by a wide fissure, bounded in front by the posterior superior transverse convolution, and behind by the occipital lobe.

FIG. 5.



PROFILE VIEW OF THE BRAIN SEEN FROM THE LEFT.

a, parieto-occipital sulcus.

The left cerebral hemisphere presented a fissure of Sylvius which began at the level of the anterior perforated space, and did not ascend the side of the hemisphere, but was deflected forwards and inwards, to be continuous with the sulcus between the two anterior transverse convolutions.

The fissure of Rolando passed outwards and backwards, not parallel with the median sulcus, but outwards along the side of the hemisphere to the first anterior transverse convolution. The parieto-occipital sulcus was less deep than that on the right side, but wider. About the posterior third of the hemisphere, below, and at its sides, no convolutions were seen.

These features represented, it was thought by your Committee, the most important points of the superficies. Of minor value would appear to be the presence of a conspicuous sulcus upon the upper surface of either hemisphere, which on the right side joined the fissure of Rolando in front and at its termination, and extended backwards and nearly parallel to the median sulcus, to terminate in the occipital lobe by a Y-shaped flange. A similar sulcus on the left side had no connection with the fissure of Rolando anteriorly, but extended back-

wards and outwards to terminate in a similar manner with that of the right side.

Two other sulci were seen, which were not symmetrical: the one on the right was a little depression about the middle of the side of the hemisphere; the one on the left, somewhat larger, seen upon the upper portion of the occipital lobe.

It will be observed that all the parts are better developed upon the left than upon the right side.

The interior of the cerebrum was a simple cavity, without any attempt apparent at the formation of *forinx*, *corpus callosum*, or *septum lucidum*. No prolongations were seen in the position of the olfactory nerves. Posteriorly, the cavity was continuous, with a cul-de-sac about seven lines in depth, apparently formed by the doubling of the cerebral tissue at that point; and the fold thereby made determined the posterior inferior border of the hemisphere. This cul-de-sac your Committee took to be in the position of the future middle horn of the lateral ventricle.

A longitudinal section of the skull was made a little to the right of the median line; yet so narrow was the pre-sphenoidal portion of the body of the sphenoid bone that the section was directed through the right optic foramen, where an optic nerve was found in position.

FIG. 6.



PROFILE VIEW OF THE IMPERFECT INTER-ORBITAL SEPTUM SEEN FROM THE LEFT.

a, the frontal bone; *b*, the ethmoid bone; *c*, the lachrymal bone; *d*, the superior maxilla.

An osseous column was now displayed, which extended in the median line from the frontal bone to the intermaxillary bone, and which was thought to answer to the associated ethmoid and lachrymal bones. No trace of the vomer could be found. The above mass measured six lines in height, six from behind forwards, and three in width. It formed an imperfect septum between the orbits, which served to separate these cavities anteriorly only, while posteriorly the eyeballs were surrounded by a common mass of fatty tissue and muscle.

The section exposed the dental sacs. The left half contained almost the whole of the palate, presenting anteriorly an intermaxillary bone, the outline of which was well marked on the upper or orbital surface. This surface terminated in an ante-

rior nasal spine. This latter process was much more pronounced than is normal, or rather the intermaxilla was deeper than normal, by which the process in question was raised above the level of the orbits. The outer walls of the orbits were normal. The floor was common to both, and was formed by a coalescence of the orbital plates of the superior maxillæ with the intermaxillæ. The infra-orbital canals were in position.

The hard palate terminated posteriorly in a normal velum. There was no room for the posterior nares: in fact, in their place was found a mere pouch of mucous membrane between the two pterygoid processes, extending below into the velum and above into the roof of the pharynx. The Eustachian tubes were in position. At the line of junction of the nasal columns with the frontal bone (Fig. 6, *a*) there was on either side a foramen transmitting a nerve which was traceable into the cranial cavity. Your Committee would take this nerve to be the nasal branch of the ophthalmic. This fact alone led them to conclude that the upper portion of the septum consisted of the ethmoid bone (*b*). The latter structure presented in the median line an imperfectly developed vertical plate, and on either side, appearing respectively in the right and left orbits, was an irregular mass of bone, which represented the lateral mass. This articulated above with the frontal bone, and below with the lachrymal (*c*) of its own side. Each lateral mass inclined towards its fellow, so that the two touched behind their entire length, forming the posterior free edge of the upper half of the column. The plates were also approximated in front, at their upper portions, but were slightly divergent below, to define, with the aid of the lachrymals, an opening which answered in position to the nasal chambers, within which was seen the lumpish perpendicular plate. The lower bone of the septum on either side was undoubtedly the lachrymal. It presented on its outer surface a marked groove which was completed by the ascending portion of the intermaxillæ. On the left side the groove was better marked, the posterior inferior angle of the bone being prolonged into a hook-like process which was attached by ligamentous union to the upper surface of the intermaxillæ. The anterior inferior angle of the bone was attached to the nasal spine of the intermaxillæ. The lachrymal bones converged and touched behind, to form a sharpened edge, which constituted about the lower half of the posterior border of the nasal column. Anteriorly, the bones aid in defining the lower portion of the lateral walls of the nasal chamber. The integument lining the proboscis-like organ was evidently continuous with the true skin-surface, but had united with the parts above described so far as to have entered and been held in close connection with the interior of the rudiment of the nasal chambers.

The thoracic and abdominal viscera were normal. A section of the lungs floated in water.

F. H. GROSS,
JNO. GUITERAS,
JNO. M. KEATING,
HARRISON ALLEN.

A CASE OF ATRESIA VAGINÆ.

BY H. S. SCHELL, M.D.

Read before the Pathological Society of Philadelphia.

ON the 2d instant an Irishwoman named Mary G. was admitted to St. Mary's Hospital, on account of a painful tumor of the abdomen. She was 30 years of age, and had been married five years. The hypogastric region was filled with a round body about the size of the womb in the fourth month of pregnancy.

From this mass an oblong tumor, about six inches long by two and a half inches broad, extended obliquely into the left lumbar region, and was movable from side to side to the extent of a couple of inches. Both of these bodies were rather hard, tense, and elastic. The patient stated that she had never menstruated, but that she had suffered from abdominal pains at monthly periods for the last twelve years. She had noticed the tumor for the last five years only. She was now scarcely ever entirely free from pain, and she anticipated the monthly exacerbation in a few days after her admission. On attempting to make a per vaginam examination, it was found that the canal was apparently somewhat in front of its usual position. It grasped the forefinger closely, and curved round immediately behind the os pubis. It was dilated at its upper part about the tip of the finger, but no os uteri could be felt.

The tumor was encountered at two and three-quarters inches from the external orifice. The rectum was large and flaccid. It dilated, immediately after passing the sphincter, into a sort of pouch. Its anterior wall was in contact with the perineum, the apparent vagina, and the base of the tumor, and, finally turning off to the left, was lost to the touch.

Visual inspection of the external organs of generation revealed well-formed labia, nymphæ, and clitoris. No normal urethra could be found, but when the finger was withdrawn from the anterior canal it was followed by a few drops of urine. The perineum was unmarked even by a dimple. When a finger was introduced into the anterior canal, and another into the rectum, there was evidently only the thickness of the walls of the two passages between them. No fibrous cord could be detected, and the coats of the two canals could be made to glide upon each other to some extent.

It seemed to me probable that this was a case of absentia vaginæ; that the large tumor consisted of the uterus distended with retained menses, and that the movable offshoot might be a Fallopian tube enlarged from the same cause.

On the 7th instant, at the probable monthly period, the woman suffered such extreme pain in the tumor that it was found necessary to resort to the hypodermic use of morphia to render her condition tolerable. As she was exceedingly anxious to be relieved, I proposed to make a vagina by incision in the perineum and careful dissection of the urethro-rectal septum, and to let out the retained menses.

On the 14th, a week after the monthly period, in consultation with Drs. Keen and Mears, it was decided to etherize the patient, and make, if pos-

sible, a more thorough examination before operating. The woman proved to be very refractory to the influence of the ether, and the consumption of a pound only produced incomplete anæsthesia, during which she made violent expulsive efforts. In one of these, a large portion of the tumor, about the size of a child's half-born head, was forced for a moment through the anus.

During the examination, the length, large size, and natural appearance of the anterior canal produced some doubts as to the correctness of the previous diagnosis. It was thought that it might be a common duct for the bladder and uterus. To this uncertainty was added the fact that the proposed operation was of a delicate character, and a fatal result from it not impossible. Under the circumstances it was decided to use the aspirator,—1, to ascertain the nature of the contents of the tumor; and 2, if found to be menstrual fluid, to relieve the uterus of most of it; and to make the proposed dissection at some future day, if thought desirable.

The puncture by the aspirator was accomplished through the rectum by means of the smallest needle, and two or three drachms of thick, slimy, red fluid removed.

It was then found that the joint between the needle and the rubber tube was not quite air-tight, so that the fluid could only be withdrawn slowly and with great difficulty. The needle was therefore removed from the tumor, with the intention of having the instrument made perfect and of taking away the rest of the fluid in a few days. The next morning, however, found the patient laboring under a violent attack of general peritonitis, which resulted fatally, in spite of treatment, on the evening of the 16th.

A post-mortem examination, made the following day, showed that the peritonitis had been caused by the diffusion throughout the abdominal cavity of the menstrual fluid previously contained in the tumor. What remained of the hypogastric tumor was now a flaccid, nearly empty sac, capable of holding about a quart. It proved to be the occluded and distended vagina. Its walls were one-fourth of an inch in thickness, except in the Douglas's cul-de-sac, where for a couple of square inches they were thin as paper. In the lower part of this attenuated region the fatal rupture had taken place, the rent being only large enough to admit an ordinary probe.

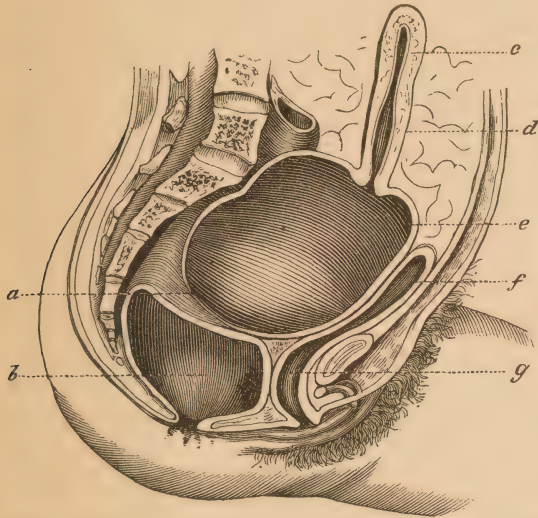
The body in the left lumbar region was found to be the hypertrophied and elongated uterus. It measured five inches long by two and a quarter inches broad. Its interior was divided into two unequal cavities, of which that of the neck was perhaps treble the capacity of the body. The walls of the organ varied in thickness from three-fourths of an inch in the body to half an inch in the cervix. The cavity contained about a fluidounce of menses, and communicated with the vaginal pouch by an orifice similar to that of the virgin uterus.

The right Fallopian tube was normal in its origin, and its distal extremity was dilated so as to hold an ounce or two of fluid.

The left tube had an irregular origin near the internal os uteri. The apparent vagina proved to

be the urethra. It was three and a half inches long, its walls thick and muscular, and it led to the bladder only. The walls of the latter were thickened and its mucous membrane congested. The fluid removed by the aspirator and also that taken post-mortem from the uterine and vaginal cavities showed under the microscope a large quantity of granular detritus, some mucus- and blood-corpuscles, and numerous crystals of cholesterin.

It was impossible to find in the rectum or vaginal pouch any trace of the passage of the aspirator-needle.



b, rectum; *c*, uterus; *d*, cervix uteri; *e*, vaginal sac; *f*, bladder; *g*, urethra; *a*, point of rupture of vaginal sac.

In the accompanying drawing I have endeavored to represent as accurately as possible a sectional view of the condition of the parts previous to the rupture of the tumor. An examination of this diagram suggests the theory that at the age of puberty the vaginal pouch was probably not far from the perineum; but as the menstrual fluid accumulated the sac gradually rose from the pelvis into the abdomen, dragging with it the rectum and urethra, the latter becoming elongated and hypertrophied to accommodate itself to the new relations of the parts, and its capacity being enlarged perhaps by *intromissio penis*.

The rectal dilatation is not so readily accounted for, but it is possible that it may have officiated vicariously in the performance of marital rites.

It is difficult to determine in this case precisely when the rupture of the vaginal sac took place; whether it was produced by the pressure used in making the examination by the puncture of the needle, or by the expulsive efforts of the woman herself. The possibility of such an occurrence was contemplated before the examination was made, and much care was taken in manipulating the parts, so that it seems improbable that this could have caused the trouble.

As to the implication of the needle in the disaster, my object was to make the puncture anterior to Douglas's cul-de-sac, so as to avoid the peritoneum if possible; and I think I succeeded. I am therefore disposed to attribute the accident to the

patient's bearing-down efforts, which were mostly reflex in their character, and caused by the introduction of a foreign body—viz., the finger or sound—into the congested and irritable bladder.

This view is rendered more probable by the fact that when the puncture was made, about five minutes after the most violent effort, the impression produced upon my mind was that the tumor was softer and farther away from the perineum than it had ever been before. At all events, in consequence of the excessive thinning of the posterior vaginal wall, a rupture at that point was imminent at any time.

The case is instructive as displaying in an unusual manner the peculiar danger of this malformation, and teaches a valuable lesson as to the propriety of an early operation.

PHILADELPHIA, February 27, 1875.

The specimen was referred for examination to the Committee on Morbid Growths, which reported, March 25, as follows:

"In Dr. Schell's specimen of congenital occlusion of the vagina, your Committee have found the black coloration of the walls of the pouch due to presence of hæmatoidin crystals and pigment-granules in the submucous and connective-tissue layers of the dilated vaginal canal. This coloring-matter has unquestionably been absorbed from the retained menstrual blood.

"The walls of the uterus are slightly thickened; there is, however, no dilatation of the uterine cavity proper, simply a funnel-shaped distention of its cervical canal. The absence in this specimen of hæmatometra, so generally an attendant upon congenital atresia of the genital canal after the establishment of menstruation, seems to your Committee explicable upon the fact that in this case the ante-flexion of the uterus, with the ensuing kinking of the organ at the internal os, has acted as a mechanical hindrance to its further distention.

"The manner in which the uterine cavity has been laid open prevents us from ascertaining whether a complete stenosis existed at the internal os. The urethra very readily admits the insertion of a finger."

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

A CASE OF DOUBLE MONSTER.

Reported by Dr. E. E. MONTGOMERY.

M. K., æt. 20, a strong, healthy German girl, unmarried, went into labor at full term on the morning of April 5, 1875. The first part of her labor was characterized by feeble, irregular pains. I was called to see her at nine o'clock in the evening. At this time the os was dilated to the size of a common half-dollar, the membranes had ruptured, and the head, covered by the womb, was presenting at the inferior strait. An anodyne was administered, after which the patient remained comparatively quiet until nine of the next evening; at this time the pains became more frequent. Upon examination, I found the os well dilated and the vertex presenting in the first position.

Although from this time the pains were powerful, the

progress of the labor was slow. Shortly after ten, the child's head emerged from the vulva, and labor again stopped. Drs. Edwards and Deaver attempted to stimulate contractions by making gentle pressure over the uterus, while I delivered the shoulders. After the delivery of the shoulders and the upper part of the body of the child, it made no progress, though the pains were severe and I made considerable traction upon the child. Finally passing my finger along its back until I reached the buttock, I in this way succeeded in delivering the lower extremities. The body of the child was held closely to the vulva by the umbilicus. We supposed we were dealing with a case of short cord, and were further confirmed in this belief by seeing a mass lying in the vulva which looked like a portion of the placenta. After waiting a few minutes, endeavoring to resuscitate the child, I introduced my hand to bring away the placenta, and came in contact with the foot of another child. This second child was rapidly delivered with its back to the pubes. The after-birth came away within ten minutes.

Neither child showed any signs of life. The head of the second was pretty well crushed by the contractions of the uterus.

The children, both males, together weighed ten pounds and four ounces, and were connected at the umbilici by a band three inches in length. Near the bodies this band was constricted, but at the centre it was seven inches in circumference, and contained a portion of the intestines. At each side the band was covered with integument to the distance of an inch, while at the under portion the integument extended across. Neither child had a perforate anus. The genitalia were well developed, as were the lower extremities, excepting a contraction of the muscles of the right leg of the first child, turning the heel in and the bottom of the foot upward.

The placenta was large, but presented no separation; the cord, which consisted of two arteries and two veins, came off from its centre. The membranes of the first child covered the whole foetal surface of the placenta, while those of the second arose from the placental end and surface of the cord, and consequently were enveloped by those of the first. The membranes of the second child were apparently a reflexion of those of the first, thus placing the child without, instead of within, the membranes.

Upon inquiry, the mother says that when she was four or five months pregnant she fell, and, as a result of the injury, her menses returned, and continued regularly until her delivery.

Assisted by Dr. Edwards, I made sufficient dissection, without destroying the band, to demonstrate the circulation and the connection between them. The umbilical cord, three inches from the children, bifurcated, and, entering the band, had a portion directed towards each child.

The circulation in the two children is the same. The vein entering the umbilicus takes its usual course to the liver; the abdominal aorta gives off but one hypogastric artery, which, passing out at the umbilicus, becomes the umbilical artery. The peritoneal surface of one was continuous with that of the other through the umbilical openings. The greater portion of the small intestines was in the abdominal cavities, but the ilei pass through the umbilical openings to the common sac, where they join to form a triangular reservoir or receptaculum an inch and a half in length by an inch in breadth at the base, which is continued by small intestines to the cæcum.

This union is some three inches from the cæcum. The latter has two appendices well developed, one on each side of a layer of peritoneum. The common large intestine terminates at the lower portion of the band in

a large pouch, which opens by a small slit-like aperture into a sulcus. This sulcus, beneath the peritoneal surface, extends from the body of one child into that of the other.

As the external genitalia were well developed, we supposed the urinary apparatus perfect, but found the urethrae closed within one-fourth of an inch of the meati, and no indication of the development of a bladder in either. On raising the ureters and introducing a probe, we found it to emerge from the sulcus at either side of the anus.

ALLGEMEINES KRANKENHAUS, VIENNA.

SERVICE OF PROF. CARL BRAUN, MARCH 23, 1875.

TWO CASES OF DUPLEX UTERUS—PREGNANCY—RETAINED MENSTRUATION—DEATH—POST-MORTEMS.

ON the morning of November 27, 1874, a patient, about 26 years of age, primipara, was admitted to the obstetrical department of the Allgemeines Krankenhaus, and, having had for some hours labor-pains, was transferred to the ward assigned to patients in labor. She was at once taken charge of by a student, who proceeded, according to the usual method adopted here, to ascertain the position of the child by palpation and auscultation. The irregular outline presented by the abdomen, however, deceived him, and he diagnosed a transverse position.

As Professor Braun made his morning visit, his attention was called to the case, and he at once proceeded to make an examination.

Inspection revealed a large tumor on the right side, running up from the symphysis and Poupart's ligament in an oblique direction, and having its base to the right of the umbilicus. This tumor had, in form and extent, the appearance of a pregnant uterus at full term. Its right and upper borders could be distinctly felt and outlined, while it was movable in the peritoneal cavity. Palpation revealed the presence of a body within the tumor, and, on auscultation, the foetal heart-sounds were readily perceptible. The left border of this tumor, at a point three inches below the umbilicus, was found to merge in another of about one-half its size. Examination showed it also to have an origin in the median line, while its fundus lay to the left of and a little beneath the umbilicus. It was very elastic to the touch. The body and fundus were quite movable, and it might have been pronounced, by an inexperienced diagnostician, an ovarian tumor having an attachment to the uterus on its left border. Attention to this tumor during the occurrence of labor-pains showed it then to be much harder and more resisting than between the periods of uterine contraction, so that there was a resemblance, not only in form, but apparently in function, between the tumors on the right and left sides of the abdomen.

On vaginal examination, a septum was found in the cervix running antero-posteriorly, and the case was diagnosed as one of duplex uterus. All attempts to discover any body in the left horn were fruitless.

The case was then left under close observation for four hours, and, at the expiration of that time, brought into the clinic. Inspection and palpation then showed no special change to have taken place. The amniotic fluid had not yet escaped, but labor-pains had become more frequent and stronger. The contraction of the right horn of the uterus was still invariably found to be attended by a contraction of its fellow on the left. Vaginal examination was repeated, and the head having descended, the position being L. O. A., it was found to be impossible to detect more than a single cavity in the cervix. The septum previously detected had either been ruptured, or the contraction of the right horn of

the uterus had so altered the relations of the parts, by forcing the head downward, that the left cervical canal was obliterated and driven backward and upward out of reach.

Professor Braun did not consider the case as demanding any assistance, and the patient was transferred to the ward.

Some time afterwards, a change in the form of the abdomen was observed, and on examination it was found that the child had been driven through the ruptured septum into the left uterine horn. In a short time delivery was accomplished: child still-born. The patient seemed exhausted, and fears were entertained that pyæmic symptoms might manifest themselves, on account of the large surface of lacerated tissue due to the rupturing of the uterine septum. On the day following, a rise in temperature and pulse indicated the correctness of this view. Her condition continued very critical for two weeks, when an attack of pleuro-pneumonia complicated it, and the patient died on the 19th of December, twenty-two days after delivery.

The post-mortem examination showed that subinvolution had but very imperfectly progressed, the right

tion, descending below the vaginal extremity of the cervix, and involving it. The uterus was thrust away from the median line to the right. The sound was introduced two and one-half inches, gliding off to the right on entering the cervix in the direction of the fundus uteri.

Upon considering the history of the case, the symptoms, and the results of the examination, Professor Braun stated it to be his opinion that the case was one of intra-mural fibroid involving the left wall of the uterus and also that of the cervix.

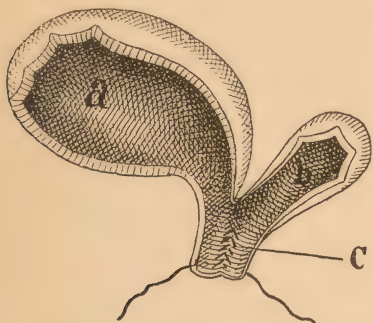
The patient insisting upon some operation for relief, it was decided to proceed to operative measures at once. The operation by enucleation was considered most advisable, and, as a large portion of the tumor descended into the left upper portion of the vagina, no special difficulty was anticipated. An incision through the cervical surface of the tumor was determined upon, its enucleation, as far as possible, by the hand, aided by instruments if necessary, and subsequent extraction by means of the craniotomy forceps.

The incision, about one and a half inches in length, was made in the tumor, when, to the surprise of all present, a dark, bloody, tenacious fluid poured forth from the opening. Professor Braun, at once convinced of the nature of the tumor by the appearance of the fluid, immediately pronounced the case to be one of duplex uterus, with congenital atresia of the external os on the left side and consequent damming up of the menstrual secretions. The tumor, which had presented the physical signs of a fibroid, was the very greatly distended left cervix, its walls being also much hypertrophied. The left horn of the uterus was thrust downward and backward into the pelvis, and had escaped the observations which had been made per vaginam.

The patient was carefully removed to bed, and every attention bestowed which it was thought would avert any serious result; but despite all treatment the temperature rapidly rose on the day following, other symptoms of peritonitis set in, and she died on the 25th, four days after the operation. The peritonitis was due possibly (may it not be said probably?) to blood forced into the peritoneal cavity through the left Fallopian tube.

On post-mortem examination, the right horn of the

FIG. 1.



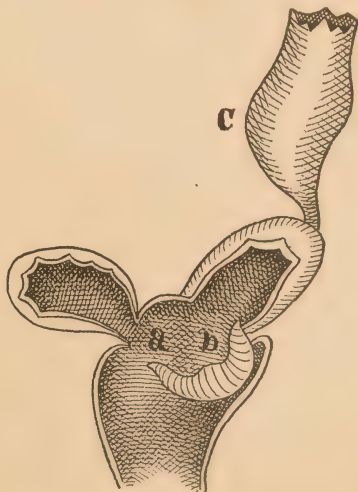
horn (*a*), the seat of impregnation, being about as large as a child's head at the seventh month of utero-gestation, while the left was twice as large as the normal uterus. The uterine tissues were infiltrated with pus, which was also found in the uterine veins and Fallopian tubes. Traces of the ruptured septum (*c*) were distinctly observable, extending from the os externum to a point marking the junction of the right and left horns.

In a case of duplex uterus previously occurring here, the left horn, non-impregnated, being caught under the projecting promontory of the sacrum, impeded the course of labor. By steady and persistent pressure it was forced upward, and delivery was accomplished without further difficulty.

The second case was that of a young woman who presented herself at the clinic of Professor Braun, January 21. She complained of having been frequently troubled with dull aching pains in the pelvis; but her appearance, far from indicating any severe or protracted suffering, was that of a person enjoying the best of health. The pains she spoke of were more severe at the menstrual epoch, and sometimes almost insupportable. The menses were regular in their occurrence, moderate in quantity, and lasted the usual time. They had first appeared about two years before, and until then she had never experienced any difficulty. With each recurrence of the same, however, the pain increased in intensity, and she was very desirous that something should be done to alleviate her suffering.

External examination proved the presence of a tumor situated just below the pelvic brim, on the left side. It was round, hard, and inelastic to the touch, and about three inches in diameter. Vaginal examination also revealed the same tense resisting body, without fluctua-

FIG. 2.



uterus was found of normal size and healthy, the left considerably larger than the right, but its tissue also healthy; the cervix of the latter (*b*) nearly spherical in form and exceedingly dilated, being, as already mentioned, about three inches in diameter. Through the incision (*a*) which had been made in the operation, it opened into the cervix of the right side. The left Fallo-

pian tube (c) was long and greatly distended, being nearly two inches in diameter, and filled with a brownish, bloody fluid, adherent to its walls and similar to if not identical in character with that which exuded from the cervix when pierced. The ovaries were large, and the right one exceedingly interesting on account of the remarkable development of the Graafian follicles.

Professor Braun stated that during an experience of thirty years, during which more than one hundred thousand patients had been under his care in the hospital wards, and a large number had been treated by him in private practice, he had never before met with a case of congenital atresia of the external os uteri. A few such cases are reported in the literature of gynaecology.

G. WILDS LINN.

TRANSLATIONS.

THE NERVI VASORUM OF THE ARM.—In Reichert and Dubois-Reymond's *Archiv* for February, 1875, Hermann Frey (Medical Student) communicates the results of his study of the gross anatomy of the nervi vasorum of the upper extremity. After careful dissection of a number of subjects with this end in view, he feels warranted in making this contribution to an almost entirely neglected point in anatomy.

Like the larger nerve-trunks, the nervi vasorum run as directly as possible to their destination; in their course deriving support and protection from their proximity to the strong sensor and motor nerves, which invariably accompany the arteries and generally the veins. The rule that an artery is supplied by its accompanying nerve does not, however, limit its nervous supply to one source, but it may be innervated in different portions of its course by different nerves. Nor is a vessel necessarily supplied by its largest accompanying nerve: it may depend wholly or in part upon some smaller branch; thus, the first collateral branch of the ulnar is innervated by the ulnar collateral branch of the radial, and not by the ulnar, by whose under side it runs to the elbow-joint.

The afferent nerves enter the vessel always at an acute angle, and should a portion of the vessel-wall immediately surrounding the point of entrance not be supplied directly, a recurrent branch is always given off, for this purpose, from the first subsequent division of the nerve. In no case was seen a short branch breaking immediately into fibres to be distributed upon the surface of the vessel, as has been described by D. Lucae;* on the contrary, a branch will accompany the vessel for some distance before entering its wall. The distribution of a nerve is generally in one plane,—i.e., if a supplying nerve runs along the superficial aspect of a vessel, it will continue thereupon to its terminal division (macroscopic).

The nerves accompanying the superficial veins are small, both on account of their structure and the facility of obtaining branches from the subcutaneous nervous mesh-work that envelops the entire arm. The cephalic vein, however, is an exception; in its upper portion it is accompanied by a branch of the posterior cutaneous nerve from the radial, to which it owes its innervation. Only one case was seen in which a plexus was found surrounding a vessel, and this was the basilic vein.

The arteries and their accompanying deep veins are furnished with larger and longer nerves, and their supply is generally taken from the nearest trunk. Thus the brachial, in the arm, is supplied by the median nerve; in its upper portion it is innervated by a branch from the brachial plexus; below its division we find that the ulnar artery and vein are accompanied and supplied

by the ulnar nerve. The radial artery, from its origin, runs a short distance without any accompanying nerve before it meets the superficial branch of the radial; to supply this defect a small branch is sent from the median.

As regards the nature of the nervi vasorum, Lucae considered that they were paler and more gelatinous than the other nerves; but they appear to differ in no respect from nerves of different function of similar size and occupying similar protected positions.

The individual anatomical observations are briefly as follows:

The cephalic vein, in its upper portion, is supplied by a branch from the posterior cutaneous nerve from the radial, which accompanies it to the clavicle.

The basilic vein is innervated, as a general rule, partly by the smaller internal cutaneous, and partly by the greater internal cutaneous.

The brachial artery obtains, in its upper portion, a nerve from the brachial plexus; in its lower portion it is supplied mainly by the median nerve, but branches are also returned from the ulnar and radial nerves for its use. A comparatively long branch from the median seems to be quite constant, and runs between the artery and vein on their under side.

The radial artery, in its upper part, is supplied by a branch from the median; lower down, by the superficial ramus of the radial, by means of short branches which enter, without much division, directly into the vessel-wall, principally from its superior aspect.

In the ulnar artery belongs a comparatively large nerve, which was in two instances seen to terminate upon the vessel, and hence is a true nervus vasorum. In one case, this nerve lay upon the vessel; in another, it ran across to the volar side, to take its course along the radial aspect to the wrist-joint; in another, it wound spirally around the vessel to attain the same point.

The superficial palmar arch is supplied sometimes from the ulnar, sometimes from the median, by short branches which enter the vessel from above.

The deep arch is always supplied by the deep ramus of the ulnar.

The arteria pectoralis major is supplied by the nerve of the same name; and the arteries for the pectoralis minor, deltoid, and supra-scapular muscles are also supplied by nerves of corresponding names.

The scapular circumflex artery and vein are innervated by the superior branch of the thoracico-dorsalis.

The first collateral branch of the ulnar has a branch not from the ulnar but from the radial (Wenzel-Gruber).

The interosseous artery and vein derive their supply from long branches of the interosseous nerve. The perforating branches of these vessels are innervated by the deep ramus of the radial nerve.

A plate exhibiting the different methods of innervation of the vessels and the distribution and termination of the nerves accompanies and illustrates the article.

F. W.

MUSTARD FOOT-BATH IN URTICARIA.—A writer in the *Tribune Medicale*, March 7, recommends the use of the mustard foot-bath in cases of urticaria. In his own case, after trying innumerable remedies, he was about to abandon all hope of relief, when, one day, while suffering from a peculiarly aggravated attack of his old enemy, complicated by an excruciating headache, and hoping to relieve the latter, he plunged his feet into a mustard-bath. The relief was instantaneous, and it seemed as though the skin-disease had disappeared by a wave of the hand.

Five other cases were subsequently treated by the writer, with similar relief. The treatment is, of course, understood to be only palliative, and has no influence in preventing recurrence of the disorder.

X.

* Reil's *Archiv für Physiologie*, 1809.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

THE SO-CALLED SYMPATHETIC NERVOUS SYSTEM.

THERE is an old saying that "Truth crushed to earth will rise again;" but the trouble with error often seems to be that human power cannot crush it. For many years the so-called sympathetic nervous system has been the ever-ready slop-shop of the baffled pathologist, out of which he has drawn ready-made explanations for all the more recondite diseases of the human system. To be sure, the garments often did not fit very well, and the winds of controversy swept through their numerous rents with chilling force, yet to many minds a sham seems better than the open nakedness of confessed ignorance. Recently those imaginative children of the present—the electro-therapeutists—have also availed themselves of this mysterious entity, and by galvanization of the sympathetic have cured all manner of human ills, almost making, according to their own reports, the blind to see, the deaf to hear, and the lame to leap as a hart. If, however, there be anything at all established by modern investigations, it is that the sympathetic nervous system is a human invention; yet teachers and writers still continue to wrap themselves in the tattered rags of old opinions, physiological text-books drive more deeply the fastenings of error by elaborate chapters on the subject, and even the greatest of all English prizes is offered in the year of our Lord 1875 for an essay on the "Diseases of the Sympathetic Nervous System."

Surely, then, our readers will pardon our occupying a brief space with the discussion of this Old-World myth.

The name sympathetic is a highly suggestive one, redolent, in its mysterious, undefined comprehensiveness, of those mediæval days when "nature abhorred a vacuum." In itself it has been a priceless treasure to those who were determined to explain everything, and a stumbling-block in the way of those who, with the true humility of modern science, contend that it is better to leave the unknown as unknown than to theorize far beyond the known facts. It is so easy to talk grandiloquently concerning the sympathies of the organs and this wonderful net-work of nerves that permeates and unites them all. The offspring of error, the name has become the progenitor of error. But let this pass; accepting the appellation as hopelessly fixed by custom, let us inquire as to the existence of the thing named.

There are undoubtedly in various parts of the body certain anatomical structures—masses of ganglionic nerve-matter connected by nerves and giving off nerves—to which the term has been applied. The question is not, however, whether there are any structures, but whether these constitute a nervous system capable of independent action and having a unity of function.

A nervous system must of course contain afferent nerves running from the periphery to the centre, which receives their transmitted impulses, and sends them back through other nerves to the periphery again. A nerve and a ganglion do not form in themselves a nervous system, else the posterior roots of the spinal nerve and their ganglia are worthy of such dignity. Where, then, is the afferent nerve of the "sympathetic nervous system"? In the posterior spinal nerve-roots and their continuation as the ordinary nerves of sensation alone exist any nerve-fibres which are capable of transmitting a peripheral irritation so that it may reach the sympathetic ganglia. In other words, the afferent nerve of the so-called sympathetic system is a cerebro-spinal nerve passing up into the medulla oblongata. If this nerve and its connection be intact, an impulse started in its periphery passes up to the medulla, down again through the cord, out with an efferent cerebro-spinal nerve, and on through one or more of the so-called sympathetic ganglia to the vessels of the body, producing a contraction of them. If the spinal nerve be cut, if the spinal cord be divided, or if the efferent spinal nerve or the so-called sympathetic ganglion be injured, the impulse which has started at the periphery of an ordinary nerve is unable to reach the vessel and produce its

effect. In other words, there is here a true physiological nervous system,—the vaso-motor,—anatomically composed of an ordinary sensitive nerve, a portion of the cerebro-spinal axis, an efferent spinal nerve, and a sympathetic ganglion with its nerves. The so-called sympathetic nervous system forms merely a subordinate portion of this complete system, which is in its origin cerebro-spinal.

Nor is there in the sympathetic ganglia any unity of function. It has recently been established that there is a nervous system that controls calorification,—*i.e.*, nutrition or the chemical movements of the tissues,—independent of the circulation and respiration. If this is to be acted upon, it is an ordinary spinal afferent nerve that transmits the impulse to the chief centre of the system, which is placed somewhere at the base of the brain. The outward track of this impulse is down through the spinal column, out along the spinal nerves, and in all probability through the sympathetic ganglia to the various organs and tissues of the body.

Again, if the upper cervical sympathetic ganglion be divided, the iris contracts; if it be stimulated, the iris dilates; if the thoracic ganglia be injured, the heart manifests the result; and the intestinal movements are directly under the control of the splanchnics.

Evidently the so-called sympathetic ganglia are only portions of various physiological nervous systems, and are nothing but reinforcing nerve-masses situated upon the tracks of efferent nerves, corresponding, it may be, to the posterior spinal ganglia on the afferent nerves.

If we view the human organism from an anatomico-physiological stand-point, there is evidently but one nervous system,—namely, the cerebro-spinal,—since all centres in the cerebro-spinal axis; but if we adopt a purely physiological point of view, there are a number of nervous systems, all finding their centres within the cranium. Of several of these—the vaso-motor, the cardiac, the intestinal, and the chemical—the sympathetic ganglia evidently form a part. It will probably be found that these outlying nerve-masses are also connected with nervous systems not yet known. The only safe method of progress is, however, simply to make the best use of known facts, not to build theories out of the mere pasteboards of imagination. It is high time, therefore, that we ceased to speculate concerning the sympathetic nerves, discussing simply the influence of vaso-motor, chemical, and other nerves, and trying, by experiment, to discover what else of importance there is in that tangled bundle of possibilities, the so-called sympathetic ganglion.

DR. THOMAS G. MORTON has called upon us with reference to the recent editorial containing a quotation from his article in regard to the statistics of the Pennsylvania Hospital. He says that he believes that in certain states of the weather in summer there is no movement of the air, and consequently no ventilation, even if all the windows be open, and he claims that in the Pennsylvania Hospital the windows are not sufficiently large or abundant, and, moreover, are so high from the floor as to leave the lower strata of air to a certain degree, as it were, in a well,—a fact which first led him to advocate the forced ventilation. He also says that he has made calculations based on the statistics of forty-five years, which appear to show that the “apparent fallacy in the statistical argument” we pointed out is more apparent than real. Thus, dividing the year into two six months,—from May to November, and from November to May,—there have been in the forty-five years, during the winter months, 359 cases, with 86 deaths, giving a percentage of $24\frac{51}{100}$; during the summer months 522 cases and 143 deaths, yielding a mortality rate of $27\frac{20}{100}$ per cent. These figures speak for themselves. In regard to our not being able to consult the hospital records, it appears that during ten years Dr. Morton kept himself the only records of amputation, so that the hospital cannot show what it does not have,—a fact that does not speak in thundering notes of praise in favor of the organization or executive management of this portion of the hospital surgical service. The subject is rendered even more difficult by this want of public records; but, correct or incorrect, our editorial has been of service, since it has led Dr. Morton to promise us at some not far distant day a careful and elaborate paper on the subject.

MR. G. W. CALLENDER, F.R.S., a distinguished London surgeon and one of the staff of St. Bartholomew's Hospital, says in a letter to a surgical friend in this city that he will probably visit this country during the latter part of the coming summer. Mr. Callender is well known for his original surgical observations and as an able contributor to periodical medical literature, and the profession of America will be glad to extend courtesy to him.

At a meeting of the County Medical Society held just after the last number of the *Times* had gone to press, Dr. William Pepper brought forward a motion to invite the American Medical Association to meet in Philadelphia next year. After considerable discussion, in which it was quite plainly shown that the intention of some had been not to

take such action, it was decided unanimously to invite the Association, asking it at the same time, however, to postpone its meeting until June.

CORRESPONDENCE.

BALTIMORE, April 24, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—For five days the attention of the medical profession was occupied by the meetings of the Medico-Chirurgical Faculty, which is our State Society. The sessions began on April 12, and terminated on the 17th. Much interest was shown in the proceedings, as was evident by the large attendance.

The regular reports presented by the officers and standing committees indicate that the faculty is in a flourishing condition. The report from the Library Board recommended adding late works to the collection of Noachian volumes now on hand, securing a pleasant reading-room, and the publication of a monthly journal. Everybody knows that it is an *extremely easy* matter to start a journal, but whether a resolution from any medical body can make it a success remains to be seen. The history of medical papers in this State has been so unfortunate that individuals and societies would do well to count the cost before making the venture. The report on Surgery was presented by Prof. Thos. R. Brown.

Dr. J. M. Toner, of Washington, delivered the Annual Oration, on the Topography of Maryland as affecting Health. Regret was expressed that the facts collected by the U. S. Census bearing upon vital statistics have not been reported by the smaller political divisions of cities and counties, instead of merely by States and districts, as the omission impairs their usefulness for comparison. To meet the want, however, he presented a table prepared to show the full number of physicians employed in the State, and the extent of their fields of labor. In 1850 the population was 583,034, of whom 990 were physicians,—a proportion of one to every 588 of the population. The total mortality was 9621. In 1860 the population was 687,049, of whom 1093 were physicians, being one to every 628. The mortality was 7374. In 1870, population 780,894, physicians 1257, or one to 621. Mortality 9740. A lengthy description of the topographical and geological condition of the State was given, dwelling upon the malaria that infests certain portions. He thinks that drainage would relieve many parts of the State of this cause of disease. For this purpose he recommended that the legislature should be requested to appoint a competent civil engineer to act in conjunction with the State Board of Health, of which body he should be a member. He should make a complete survey of all the swampy, badly-drained, and water-soaked lands of the State, and suggest measures for abating the nuisance. The doctor closed his address by making a complete review of the various surveys made throughout the State, and warmly commended the western section as being as healthy a

region for summer resort as there can be found in the United States.

The report from the section of Materia Medica was presented by Prof. McSherry. He spoke at length on calomel as a cholagogue, quinine in the summer diseases of children, hæmatoxylin in membranous enteritis, kousso and sulphur in tapeworm, and ergot and phosphoric acid in some diseases of bladder and rectum.

Dr. G. H. Boyland read a paper on "Cases in Foreign Hospital-Practice." The cases were interesting; but why a paper made up of cases copied from medical journals should be read as an original paper I cannot see.

Prof. F. T. Miles and Dr. I. E. Atkinson both read papers of some interest.

"Tinnitus Aurium," by Dr. Theobald, was an interesting paper. He thinks that tinnitus is produced by the vibration of the walls of the blood-vessels, produced by friction of the circulating blood, which excites the terminal filaments of the auditory nerves.

Prof. Chew read a paper on "Digitalis in Heart-Disease."

The report on Obstetrics and Gynæcology, by Prof. W. T. Howard, was long and dry, and not very new. When I mention the fact that he kept the floor for three hours, you may know the audience was exhausted, if the subject was not.

The officers for the year are: President, Dr. J. F. Monmonier; Vice-Presidents, Drs. C. Johnston, A. B. Arnold, J. C. Thomas; Recording Secretaries, Drs. W. G. Regester and G. L. Taneyhill; Treasurer, Dr. J. Gilman. Chairmen of the Sections: Surgery, Dr. C. Johnston; Practice, Dr. A. B. Arnold; Obstetrics, Dr. W. T. Howard; Materia Medica and Chemistry, Dr. D. J. McKew; Meteorology, Dr. E. Lloyd Howard; Anatomy and Pathology, Dr. H. R. Noel; Psychology and Physiology, Dr. J. S. Conrad. Drs. N. P. Smith, J. F. Monmonier, John Morris, C. Johnston, F. Donaldson, J. J. Cockrill, A. Hartman, P. C. Williams, S. C. Chew, J. Gilman, A. B. Arnold, A. F. Erick, E. L. Howard, G. L. Taneyhill, F. T. Miles, H. R. Noel, W. G. Regester, T. S. Latimer, C. H. Jones, L. Ellicott, J. C. Thomas, J. A. Stewart, D. J. McKew, W. C. Van Bibber, T. R. Brown, R. Buckler, R. McSherry, and H. T. Rennolds were appointed delegates to the American Medical Association. The meetings of the Faculty have improved in interest very much with the last few years, but they might be much better if gentlemen could learn the art of condensing. Some of the memoirs were much longer than the subject justified, and many papers were, on account of want of time, referred to the Committee on Publication unread. I had intended to say something about the Johns Hopkins Hospital and University, but must defer it until next time.

Yours, etc.,

MEDICUS.

Harvard University now requires a preliminary examination, or its equivalent, before entrance of the medical department.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, FEBRUARY 25, 1875.

THE PRESIDENT, DR. H. LENOX HODGE, in the chair.

DR. H. S. SCHELL presented a specimen of *atresia vaginæ*, which is reported in full in another column of the current number of the *Times*, together with the report of the Committee on Morbid Growths.

Dr. H. LENOX HODGE remarked that one point of practical interest was whether the aspiration had anything to do with causing death. He had himself many times passed a needle into the abdominal cavity, both from the vagina and through the abdominal walls, and had never had the slightest accident to result. He was glad to find that Dr. Schell did not ascribe the death of the patient to the aspiration, but to the peritonitis caused by the rupture of the cul-de-sac.

Dr. SCHELL said the examination was made under the influence of ether, of which a very large quantity was used,—more than a pound. The patient resisted etherization so violently that at one time a large portion of the tumor protruded through the anus, looking not unlike a child's head, and he thought it probable that at that time the rupture took place. There was no great force used by the surgeons in their manipulations, because rupture was anticipated.

Dr. HODGE further called attention to the band of tissue running through the sac of the vagina, separated and isolated from the surrounding structures, save at its extremities; also, to the fact that the Fallopian tube appeared to enter the uterus at one side near its middle, and at the other in its usual place.

Dr. SCHELL called attention to the interesting fact that the neck of the uterus was dilated much more than the body, whereas one would suppose that the body would be the portion most dilated in retained menses.

Dr. HODGE said he had had no experience in retained menses, but he had often heard his father express surprise at the little effect the retention seemed to have upon the uterus, and that in his cases the distention was almost entirely that of the vagina, while the uterus was very little enlarged, floating, as it were, above the blood. In this instance, however, not only the vagina, but the major part of the uterus also, was enlarged.

REVIEWS AND BOOK NOTICES.

A STUDY OF FEVER. The Toner Lecture for 1875. By HORATIO C. WOOD, M.D. Smithsonian Institution. (Kept on sale by J. B. Lippincott & Co. Price 25 cts.)

This pamphlet is as well worth reading by thoughtful physicians as anything which has lately passed under our eyes; and whether or not we differ with its able author as to his conclusions, no one can fail to feel that the argument is most intelligent, and that the experiments are devised by one who has a gift for research which needs only use to become of the utmost value to medicine. Dr. Wood wishes to prove that fever is heat and its consequences,—or that heat will cause all the phenomena of fever; that local application of heat causes such functional disturbances as are familiar to us in fever; that to lessen heat is, in fever, to relieve such functional symptoms. Then follow Dr. Wood's details of his former experiments on the fatal influence of heat. Here we want somewhat experiments on the prolonged subjection of animals to a moderate

heat; and we still lack throughout all the proof that artificially-induced fever increases the chemical products of the body, and that such products are akin in the fever of disease and that of the laboratory.

Dr. Wood next asks in what way the febrile rise of temperature is caused, and shrewdly puts the question on p. 12 as to hæmic or neurotic parentage for fever, concluding that there is a neural "fever-centre," and that it is this which is influenced, directly or indirectly, by so-called hæmic poisons. The discussion which follows as to like production of local fever and of urethral fever is especially interesting. Then comes a series of experiments to prove that the fall of temperature caused by irritation of a sensitive nerve is independent of the circulation,—that is, the change is not due to lessened blood-flow, and, if not, is due to direct influence of the nervous system upon the heat-producing function of the body. Dr. Wood next states the facts in sequence leading up to his own contributions. They are these: Section of the spinal cord in the neck causes—first, a slight fall, and then a rise of temperature to fever if the animal be kept warm,—as in a box or covered with cotton,—but unhurt animals so placed do not grow overheated. Section of cord between the medulla oblongata and the pons Varolii gives immediate rise and no fall of temperature. These latter facts rested on one experiment by Tscheschichin, and have been thoroughly reproven by Dr. Wood, who also seems to show pretty clearly that this operation leaves the vaso-motor centres in the medulla oblongata untouched, because they are below the point of section.

Dr. Wood concludes from these facts that the vascular disturbance has no share in the fever of spinal sections, as to which it is but just to add that so pregnant a conclusion can hardly be accepted without much more and much more varied evidence; nor will it be complete until, by some rapid means, as the thermo-multiplier, a rise in temperature after spine-section can be seen in limbs devoid of blood. If by an Esmarch bandage a limb were emptied of blood, and then found to rise in heat ever so little after spinal section, the case for a centre-controlling chemical activity, not alone through vascular dilatation and contraction, would be well made out.

In Dr. Wood's next corollary he follows Tscheschichin, and thinks with him that above the medulla oblongata must lie a centre capable of lessening chemical action, and, of course, with it the product of heat. As concerns this point, it may be well to remark that it is hard to get away from the idea of ordinary nutritive chemical activities, and that whoever deals with the question of the heat-making chemistry cannot escape from considering, in its relation to them, the questions as to nutritive centres, which, if they exist, must be more or less regulative of heat-product.

The remainder of this very able paper is chiefly taken up with illustrations from disease, meant to show how completely the idea of an inhibitory heat-centre explains its thermal phenomena. We are, however, not quite of Dr. Wood's opinion that cerebral rheumatism is "completely cleared up" by this theory. It is, of course, possible that rheumatism may fall on the centre in question and paralyze it; but the first effect ought to be, one would think, irritative, and should call out an explosion of inhibitive force which would be seen as lowering temperature, and only raise it when the palsy-point was reached. Then, also, it seems strange that no other brain-malady which affects these centres seems to create the enormous rise of temperature due to rheumatism. The difficulties which gather thick about this subject are admirably illustrated on p. 34 of a most masterly clinical paper upon cerebral rheumatism, by Prof. Da Costa, *American Journal of the Medical Sciences*, January, 1875.

Dr. Wood has certainly pointed thought in a new

direction, and has begun what we hope to see him complete, for no subject in the range of physiology promises more to a worker so ingenious and so fertile in experimental resources.

S. WEIR MITCHELL.

THE HISTOLOGY AND HISTO-CHEMISTRY OF MAN. By HEINRICH FREY. Translated from the Fourth German Edition by ARTHUR E. J. BARKER, Surgeon to the City of Dublin Hospital. New York, D. Appleton & Co.

The present volume is by no means a new acquaintance; it is rather an old friend in a new dress. We have long known the original German work as on the whole probably the best that exists for the use of the average medical practitioner, or the special student of the subject during his earlier studies. A somewhat cursory examination of the volume before us has led us to the opinion that the translator has done his work well. The printing and proof-reading also are good, and we can therefore commend the work most highly to the attention of our readers.

A COURSE OF LECTURES ON PHYSIOLOGY, as delivered by PROF. KUSS at the Medical School of the University of Strasbourg. Edited by MATHIAS DUVAL, M.D., formerly Demonstrator of Anatomy at the Medical School of Strasbourg, etc. Translated from the Second Revised Edition by ROBERT AMORY, M.D., formerly Professor of Physiology at the Medical School of Maine, etc. Illustrated by 150 wood-cuts inserted in the text. Boston, James Campbell, 1875.

We hail with pleasure the appearance of this work, as furnishing the first exposition in the English language of what may be termed the modern physiology. Notwithstanding the numerous text-books on this subject now extant, there is not one, with the exception of this just issued, which affords the student an opportunity of becoming familiar with the new aspect which physiology has acquired in the past ten years. Further, with few exceptions, the entire subject in its different departments is equally considered—no undue proportion of space being devoted to one to the exclusion of another—in little more than five hundred moderate pages, so that the student can easily compass its extent in the time allotted him.

The author very properly begins the first part with general physiology,—cellular physiology,—and, after a somewhat clumsy effort to define physiology, takes up *the cell*, which he indicates indifferently by the latter term and the word *globule*, to which we object emphatically. For although the correct notion of a cell in its active, growing state makes it anything else but “*a cell*” or *vesicle* in the strict sense of the word, and although it is really a clump or mass of *living* matter, the word *globule* has become so closely associated with a spherical mass of *dead* material either of microscopic size or larger, and, under the former circumstances, presenting such well-defined characters under the microscope,—those of a bright centre and dark outline, the width of the latter being directly as the difference in the refractive index of the globule and the menstruum in which it floats,—that it seems like retrogression to reapply it to the “elementary part.” While the term “cell” is also objectionable for the above reason, it is less so than the word “globule,” because there is a period in the history of many cells at which they are *vesicular*, and it has, moreover, become so engrafted upon histology that there is some justification for its use. We much prefer, however, the term “elementary part,” which not only does not clash with our present idea of the anatomy of the cell, but will also be in accord with any future modification of it.

The *second* part of the book is devoted to the nervous system; the *third*, to contractile elements,—muscles and

their appendages; the *fourth*, to the blood and its circulation; the *fifth*, to a general view of epithelial globules and epithelial surfaces; the *sixth*, to the *digestive system*; the *seventh*, to pulmonary mucous surface, respiration, animal heat, and phonation; the *eighth*, to the external integument; the *ninth*, to the organs of special sense; and the *tenth*, to the uro-genital system and embryology. In the last, the view adopted of the minute structure of the kidney is not that which seems clearly established by the latest researches of Ludwig and Henle, as well as the earlier ones of Todd and Bowman. By the author the Malpighian body is described as formed by a surrounding of the Malpighian tuft by the Malpighian capsule, in a *depression* of the capsule, the two surfaces of the latter being closely opposed, and the whole capsule folding over the tuft somewhat as the pleural sac embraces the lung, the afferent and efferent vessels bearing the same relation to the capsule as the root of the lung does to the pleural sac, instead of perforating it as is generally taught.

With regard to the secretion of urine, also, Küss adopts the somewhat singular view of Wittich, that it is a filtration of *all* the constituents of the liquor sanguinis, *including the albumen, which is, however, re-absorbed by the epithelial cells* of the uriniferous tubules beyond the Malpighian capsule. While there is no doubt that a large part of the act of secretion of urine is accomplished by the processes of filtration under pressure and of osmosis, we cannot believe that in health the albumen is forced through the walls of the blood-vessels as it is in disease; while we further prefer to adopt the intermediate ground, according to which the water and inorganic salts of the urine are obtained through filtration and osmosis; but the organic constituents, urea and allied substances, are added through a *secretory* action of the cells.

While all that we have said in favor of this work, to which we have devoted more than our usual amount of space, is strictly true, and while, on the whole, we find in it a book better adapted to the wants of the student than any other in the English language, yet it is far from being a perfect text-book, and in this we are glad that its able translator, Dr. Amory, agrees with us.

In the first place, as Dr. Amory says in his preface, too much prominence is given (we mean for the purposes of the student) to the author's peculiar views, to the exclusion of others; second, it lacks that clearness of expression and sharply-defined systematic arrangement which is so necessary for the student, while there is sometimes so much ambiguity in the language used that even those who have some knowledge of physiology cannot always arrive at the author's meaning. These are serious defects in a text-book. They may be, in part, due to the difficulties in translation. Of this we cannot be certain, as we have never seen the book in the original; but we think so practical a physiologist as Dr. Amory would have been justified in sacrificing literalness of translation to clearness of meaning.

A few errors which have escaped the proof-reader, such as the use of singular verbs with plural nominatives (p. 27), the substitution of the words “spinal canal” for “spinal cord” (p. 34 at end), and some others, we hope the translator may have an opportunity to correct in an early second edition.

J. T.

QUADRUPLETS.—The *Lyon Medical* states that the Countess Schlippenbach, in Croatia, was lately delivered of four children, three girls and one boy. A woman of the name of Latouche, of Saint-Roch, near Quebec, is also mentioned as having given birth to four fine boys. The paper does not state whether these children lived.

SELECTIONS.

SPECK ON DEATH FROM A RATHER HIGH TEMPERATURE.—C. Speck publishes a case in Eulenberg's *Vierteljahrsschrift für gerichtliche Medicin und öffentl. Sanitätswesen*, vol. xxi., quoted in *Centralblatt für die Medicinischen Wissenschaften*, Feb. 27, 1875, of death which he attributes to a high temperature. A girl aged seventeen, who had suffered for eight years from contractions of all her joints, was enveloped, as a remedial measure, in the skin of a sheep just killed, then surrounded with fresh-baked hot bread, and a covering thrown over all. She complained after an hour of feeling uncomfortable, and of pain, then sank into sleep, then had difficulty of breathing, and perspired a great deal; lastly, became pale, and died about three hours from the beginning of the 'cure.' The most marked feature of the necropsy was advanced decomposition, although the surroundings were not favorable to this. The finest vessels in the pia matter were injected, whilst the larger were almost empty of blood, but contained air [*sic*]. The heart and large vessels were almost bloodless; the pericardium contained frothy fluid. The walls of the heart were pulpy, and studded with punctiform ecchymoses. The medico-legal report was to the effect that, in the absence of any other cause of death, the advanced decomposition pointed to decomposition of the blood, and that death was probably due to the so-called 'cure.' Reference was made to the investigations of Bernard and Ackermann, showing the injurious effects of temperatures equalling or exceeding the normal temperature of the body. Speck satisfied himself that bread exposed to the air in a room at the temperature of 16° or 17° (60° to 62° Fahr.) had, after two hours, a temperature of 45° (113° Fahr.) in the interior. [The reporter thinks it far more reasonable to attribute this death to the carbonic acid, etc., given off from the bread, especially as he knows of a somewhat similar case which occurred in the country some years ago, when death, with all the signs of suffocation, followed from a similar procedure advised by a quack. It is also well known that accidents of this kind used to occur to journeymen-bakers some years ago. The empty condition of the heart and great vessels was, no doubt, due partly to the youth of the victim and partly to decomposition.—*Rep.*]—*W. Bathurst Woodman, M.D., in London Medical Record.*

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF RHEUMATISM AND GOUT WITH TRIMETHYLAMIN.—Mr. W. H. Spencer contributes to *The Practitioner* (February and March) the results of his experience in the use of this remedy.

After giving a brief *résumé* of the chemical history and properties of the drug, he gives the notes of a number of cases, treated either with the somewhat impure trimethylamin (called propylamin in commerce) or with the synthetically-prepared chloride of trimethylamin. The dose employed varied much: it ranged from nine to thirty minims for the solution, and did not exceed ten minims for the salt.

As supporting the probability of variation in composition, Mr. Spencer, at different times, found that the same results were obtained with a dose of two minims as with a dose of eight. His method of administering the drug is in doses of four to eight minims, at first every hour or two hours, increasing the interval as the pains diminish and the case progresses. When all pain is gone he ceases to give the remedy, and substi-

tutes in most cases quinine. He rarely has to re-exhibit the trimethylamin, but does so if the pains recur. Mr. Spencer's cases are sixty in number, of which notes are given in twenty-one, including cases of acute and chronic rheumatism, gout, and gonorrheal rheumatism. In the latter, trimethylamin seemed to have only a temporary effect. In the others its effect was always beneficial,—sometimes remarkably so. The chloride failed in a number of cases, and the solution ("propylamin," so called) had to be substituted.

Continental observers have stated that under the influence of trimethylamin the amount of urea excreted is increased, whilst the amount of urea excreted is diminished. M. Bouchard found that one of the physiological effects of trimethylamin was diminution in the excretion of urea. It has been observed that a sudden and inexplicable increase in the amount of the urea excreted is liable to occur during the use of trimethylamin. All of these observations are confirmed by Mr. Spencer's experiments. Among the unfavorable effects of the remedy may be mentioned certain nervous symptoms and headache, occurring in some cases; in others, gastric disturbance and diarrhoea were brought on even while the remedy continued to do good. In one or two cases the use of trimethylamin seemed to exercise a pernicious effect upon certain intercurrent sores, causing sloughing, which was only healed when this drug was discontinued. The remedy appears to exercise but little influence on the course of the fever, as indicated by the thermometer, in opposition to the views of Continental observers. On the other hand, it appeared in many cases as if the cardiac symptoms were actually aborted.

THE VALUE OF TAR IN BRONCHIAL CATARRH AND WINTER COUGH.—Drs. Sidney Ringer and William Murrill contribute a note on the use of tar to the *British Medical Journal*, March 20. They have employed tar in two-grain doses, made into a pill, every three or four hours. From October to January inclusive its effects were watched on twenty-five patients, whose ages varied from 34 to 70. All these patients had suffered several years from winter cough, lasting the whole winter.

These patients suffered from paroxysmal and violent cough, each attack lasting from two to ten minutes,—recurring ten or twelve times in the day, and breaking their rest at night. Expectoration abundant, frothy, and purulent. Breathing short on exertion, but most could lie down at night without propping. The physical signs showed a variable amount of emphysema, with sonorous and sibilant rhonchus, and occasionally a little bubbling rhonchus at the base. These patients usually began to improve from the fourth to the seventh day; the improvement rapidly increased, and in about three weeks they were well enough to be discharged. The improvement was so decided that even those patients who, in previous years, had been confined to the house during the whole winter, returned to their work. On discontinuing the tar, relapses often occurred in a week or two, but on re-administering the medicine relief was again obtained.

TREATMENT OF NÆVI BY ELECTROLYSIS.—Dr. S. I. Knott reports (*Lancet*, March 20) a number of cases in which he has employed electricity in the removal of nævi from all parts of the body, with great success. He uses Stöhrer's and Meyer and Meltzer's continuous batteries, and judges, according to the size of the nævus, how many cells to use. Six or eight is about the average if the battery is in good working order. If the nævus is small he uses one or two needles attached to the negative pole, and one to the positive, and passes them into the tumor; but if large, he puts on several needles in the negative cord, and uses a charcoal point with the positive. After the needles have been in the

tumor a short time, decomposition begins to take place: this is shown by bubbles of gas passing by the side of the needles. A clot is then formed, the tumor turns of a bluish white, and in this clot fibrous degeneration takes place, and ultimate cure is the result. The advantages of the galvanism are its certainty of action, its safety, the faintness of the cicatrix, and the cessation of pain directly the operation is over.

Dr. Knott has used every other method, but thinks this is by far the best. His communication closes with the notes of thirteen cases, out of some forty upon which he has operated.

CASE OF COXITIS TREATED BY EXCISION.—The following case is reported by Mr. Hulke in the *Lancet*, March 20. A lad of 19 was admitted into the Middlesex Hospital, with coxitis of about twelve years' duration. The left lower extremity was very much wasted, the thigh strongly flexed and adducted, and very firmly ankylosed to the pelvis. He complained much of pain in the knee and hip, aggravated by the least attempt at passive movement or pressure on the hip. The leg was flexed at about 90°, and the knee contracted. The left thigh was fourteen inches long, the right, seventeen and a half inches. There were scars of former abscesses about the hip. The disease dated back to a fall twelve years previously. Various abscesses formed from the time of his admission, March 6, 1874, until May 6. At that time resection of the head of the femur was performed, a drainage-tube was inserted into the acetabulum, and the wound closed, after having been washed out with chloride of zinc. The bent knee did not allow the application of a splint; extension and fixation were therefore maintained by straps, cord, and weight. The patient rallied slowly, and lingered through the summer until October, when it was decided that his only chance lay in an amputation at the hip-joint. This operation was therefore performed; lateral skin-flaps being cut from without and reflected, and then the muscles divided, circularly, close to the face of the pelvis (Guthrie's method). The wound healed kindly, and the patient still survives, March 20, 1875, with a good chance of ultimate recovery.

LADIES' RETIRING-ROOMS IN LONDON.—A company has been formed in London for the purpose of establishing ladies' retiring-rooms. It having been suggested in the *Lancet* that certain risks would be run at such establishments, the secretary writes to the editor of that journal as follows:

"SIR,—The gentlemen who have associated themselves to form a company for the purpose of establishing ladies' retiring-rooms, etc., are much indebted to you for the notice of their project which you were pleased to give in your issue of January 16. With reference to your concluding remark as to the risk which ladies might run of contracting a contagious disease, those gentlemen would be glad of an opportunity of stating in your columns, for the information of 'parents and husbands,' what they could not very well set forth in their printed scheme,—namely, that it will be insisted on that the matron in charge will see, immediately after any closet is used, that it is well cleansed and dried, and in all respects made fit for subsequent use. In order that this may be effectively carried out, as large a number of closets as possible will be fitted up at each of the resting-places. Moreover, it is in contemplation to introduce more than one *description* of convenience, and large sheets of paper will be provided for placing over the seats if desired, and other similar provisions will be made. For example, a large number of *false seats* might be prepared at comparatively small cost, very light, and capable of being readily washed all over, so as to allow of a perfectly clean and dry seat being available for each visitor. The

main seat of each closet will be of highly-polished wood, probably mahogany, and glazed tiles will be very freely employed. The gentlemen associated with me are well assured that the success of the undertaking will depend in great measure upon one thing, and that is *cleanliness*. With thanks on their behalf,

"I remain sincerely yours,

"TOM NICHOLS,

"Hon. Sec. to the proposed Company."

TREATMENT OF FRACTURED PATELLA.—*The Practitioner* for March contains three short communications on this subject, by as many surgeons. Mr. Spence recommends a modification of Malgaigne's hooks, these being fastened in strips of moleskin adhesive plaster cut out carefully to fit the skin, and attached above and below the knee. By this means the irritation caused by inserting the hooks into the live integument is avoided.

Mr. Callender, of St. Bartholomew's Hospital, treats fracture of the patella by a peculiar arrangement combining the swinging splint with the pulley and weight. The latter is attached to plaster strips, fastened below and above the knee, so that its weight pulls them together. Cuts are given illustrating both these plans of treatment. The third method, called the "expectant," is advocated by Mr. McGill, Surgeon to the Leeds Public Dispensary, as Mr. Teale's treatment. Mr. Teale simply places the leg on a pillow slightly bent between sand-bags, or on a straight splint, with the heel slightly raised, and the patient is confined to bed for six or eight weeks, and then when allowed to get up is fitted with a soft leather splint, which will limit but not arrest the movement of the joint. Mr. McGill advocates a somewhat similar treatment for fracture of the olecranon, using a rectangular splint.

SUCCESSFUL LIGATION OF THE COMMON CAROTID.—Dr. N. B. Kennedy (*Am. Med. Weekly*, April 10) was called to see a man, sixty-three years of age, who had, with suicidal intent, taken two ounces of laudanum, and a few hours later cut his throat with a pocket-knife. On examination, a transverse wound was found, about two and a half inches in length, extending from near the trachea to the outer border of the sterno-cleido-mastoid muscle of the right side. The common carotid artery had been severed at a point just below where it is crossed by the omohyoid muscle. The sheath of the artery had been opened for an inch or more; the descendens noni nerve and jugular vein were uninjured. A single ligature was passed around the vessel with the aid of an aneurism-needle, and tied with a double knot; one end being then cut off, and the other allowed to hang out of the wound. The external wound was closed by three interrupted sutures, and cold-water dressings were applied. The patient made a remarkably rapid recovery. On the morning subsequent to the operation he rose and dressed himself, declaring that he felt well, but weak; on the third day he went out riding, and the complete cure was effected in a very short time.

ERGOTIN IN FIBROID OF THE UTERUS.—Dr. Bartholow (*The Clinic*, January 23) had recently under his care a case of submucous fibroid of the uterus, for the cure of which he resorted to the hypodermic injection of an aqueous solution of ergotin in one-grain doses night and morning. On the afternoon following the injection the patient began to feel expulsive pains, which continued to increase in severity. After two weeks the injections were practised only once daily.

One week later the pains had diminished in severity, and, on examination, the neck of the uterus was found very much dilated and plugged with a tumor, which was then easily removed by the *écraseur*. The patient fully recovered, and has suffered none since the removal.

NOTES AND QUERIES.

FAILURE OF CHLORAL IN PUERPERAL CONVULSIONS.

WATSONTOWN, PA., April 17, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

Not long since, a number of physicians, through *The Medical Times*, claimed priority in the use of hydrate of chloral for puerperal convulsions, and, impressed by the tone of these claims, I judged we had a specific for the malady.

Several weeks ago I had the misfortune to have a patient attacked, three hours after delivery, with convulsions, violent and frequent (every half-hour regularly). I gave her at once twenty grains hydrate chloral. In half an hour I gave her thirty-five grains more, and in about an hour repeated the thirty-five grains, all of which had no effect on the frequency or severity of the paroxysms. In about eight hours I gave her thirty-five grains more without effect. In from one to two hours thereafter they suddenly ceased without any apparent cause, unless from an application of mustard to the spine, and the patient recovered. The patient was stout, hearty, plethoric, but had flooded considerably after delivery, and was somewhat exhausted.

The only case besides this one I ever treated seemed to yield to morphia and chloroform, while in this I think hydrate of chloral failed utterly. Or was it from an ignorant and limited use made of it? If so, I would be obliged for a hint to that effect. Taking this community, I think I can find at least five women who have survived convulsions for every one who died with them,—all this from varied treatment. Can any of the above aspirants give us an experience where chloral has cured a greater proportion? and, if not, on what do they base its happy effect?

J. J. LEISER.

CANINE SAGACITY, IN A SURGICAL CONNECTION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In a letter recently received from Lancaster, where my father resides, it is said:

"A queer thing occurred just now. Father was in the office, and heard a dog yelping outside the door; he paid no attention until a second and louder yelp was heard, when he opened it, and found a little brown dog standing on the step upon three legs. He brought him in, and, on examining the fourth leg, found a pin sticking in it. He drew out the pin, and the dog ran away again."

The office of my father, Dr. Atlee, is not directly on the street, but stands back, behind in front of it some six feet a stone wall with a gate. I will add that it has not been possible to discover anything more about this dog.

This story reminds me of something similar that occurred to me while studying medicine in this same office nearly thirty years ago. A man named Cosgrove, the keeper of a low tavern near the railroad-station, had his arm broken, and came many times to the office to have the dressings arranged. He was always accompanied by a large, most ferocious-looking bull-dog, that watched me most attentively, and most unpleasantly to me, while bandaging his master's arm. A few weeks after Cosgrove's case was discharged, I heard a noise at the office-door as if some animal was pawing it, and, on opening it, saw there this huge bull-dog, accompanied by another dog that held up one of its front legs, evidently broken. They entered the office; I cut several pieces of wood and fastened them firmly to the leg with adhesive plaster, after straightening the limb. They left immediately. The dog that came with Cosgrove's dog I never saw before nor since.

WALTER F. ATLEE.

TREATMENT OF NASAL POLYPI.

BALTIMORE, April 21, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR DOCTOR,—I was pleased to see an article in No. 181, current volume of the *Medical Times*, on "Muried Tincture of Iron a Cure for Nasal Polyp," by my esteemed friend and former colleague, Prof. George Troup Maxwell, M.D., of New Castle, Del. I am able to bear corroborative testimony to its great value in that regard, from my personal observation of its action in destroying and preventing a return of the trouble. The first case in which I used the tincture of iron in the treatment of nasal polypus was that of George Wilson, Esq., of Savannah, Georgia, in 1859, on whom the operation of evulsion had been performed several times, with, as is often the case, only temporary benefit, the polyps returning after each operation in increasing volume, notwithstanding the greatest care in their removal and the most approved subsequent treatment. The patient was a young and healthy man, and had about given up all hope of the radical

cure of his trouble, when the iron-treatment was decided upon. The suggestion for its use, if my memory serves me correctly, came from my friend Dr. Maxwell. The iron in full strength was applied by a camel's-hair brush to the polyps nearest the external nares, and injected; when those came away, diluted one-half to one-third; and retained in contact with those farther on for a minute or two once a day. In a few days every vestige of the trouble disappeared, never to return again. In my hospital experience during our late civil war, several opportunities were afforded for testing the efficacy of this treatment, and always with success.

Very truly yours,

HARVEY L. BYRD, M.D.

THE attention of the municipal authorities, of the censors of the county medical society, or of the proper person or persons, whoever they may be, is called to the following local, taken from a Chambersburg paper. It ought to be ascertained whether the "doctor" complies with the law in Philadelphia:

"WITHDRAWAL OF APPOINTMENTS.—Owing to the recent law which passed the last legislature (approved by the Governor on Tuesday last), regulating the practice of medicine in Pennsylvania, Dr. Darmon has been compelled to withdraw his appointments with patients in this county. He will, however, he requests us to state, continue to treat patients by letter in all parts of the country, if they will send him a description of their cases, as cheaply as if he were present. His address is Wm. Darmon, M.D., No. 1824 Camac Street, Philadelphia."

ERRATUM.

For *urine*, in the account of Neubauer's experiments on salicylic acid, page 376, read *wine*.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 20, 1875, TO APRIL 26, 1875, INCLUSIVE.

MCCORMICK, CHAS., SURGEON.—Granted leave of absence for four months, with permission to go beyond sea. S. O. 69, A. G. O., April 19, 1875.

SLOAN, WM. J., SURGEON.—When relieved by Surgeon Head, to report to Commanding General, Department of Dakota, for duty as Medical Director. S. O. 73, A. G. O., April 23, 1875.

HEAD, J. F., SURGEON.—To report to the Commanding General, Department of the South, for duty as Medical Director. S. O. 73, c. s., A. G. O.

HAMMOND, J. F., SURGEON.—Granted leave of absence for one month on Surgeon's Certificate of Disability. S. O. 67, A. G. O., April 15, 1875.

BYRNE, C. C., SURGEON.—Transferred from Willet's Point, New York Harbor, to Department of Dakota. S. O. 73, c. s., A. G. O.

FRANTZ, J. H., SURGEON.—Transferred from Department of the South to Military Division of the Atlantic. S. O. 73, c. s., A. G. O.

GIBSON, J. R., ASSISTANT-SURGEON.—Transferred from Department of the South to Department of the Platte. S. O. 73, c. s., A. G. O.

KINSMAN, J. H., ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 62, Department of Dakota, April 15, 1875.

O'REILLY, R. M., ASSISTANT-SURGEON.—Relieved from duty in Department of the Platte, to report to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, by letter to the Surgeon-General. S. O. 73, c. s., A. G. O.

WHITE, R. H., ASSISTANT-SURGEON.—Leave of absence extended six months, with permission to go beyond sea. S. O. 67, c. s., A. G. O.

ELBREY, F. W., ASSISTANT-SURGEON.—Assigned to duty at Lebanon, Kentucky. S. O. 52, Department of the South, April 21, 1875.

MATTHEWS, W., ASSISTANT-SURGEON.—Transferred from Military Division of the Atlantic to Department of California, and, prior to his departure, to report in person to the President of the Army Medical Board, New York City, for examination for promotion. S. O. 73, c. s., A. G. O.

MUNN, C. E., ASSISTANT-SURGEON.—Transferred from Military Division of the Atlantic to Department of the Platte. S. O. 73, c. s., A. G. O.

COWDREY, S. G., ASSISTANT-SURGEON.—Relieved from duty in the Department of the Missouri, to report to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, by letter to the Surgeon-General. S. O. 73, c. s., A. G. O.

SKINNER, J. O., ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 69, c. s., A. G. O.

FINLEY, J. A., ASSISTANT-SURGEON.—Transferred from Military Division of the Atlantic to Department of the Missouri. S. O. 73, c. s., A. G. O.

BEDAL, S. S., ASSISTANT-SURGEON.—Transferred from Military Division of the Atlantic to Department of Texas. S. O. 73, c. s., A. G. O.

HAMILTON, J. B., ASSISTANT-SURGEON.—Transferred from St. Louis Barracks, Missouri, to Department of the Columbia. S. O. 73, c. s., A. G. O.

SATURDAY, MAY 8, 1875.

ORIGINAL COMMUNICATIONS.

ON THE USE OF THE OPHTHALMOSCOPE IN THE DIAGNOSIS OF CEREBRAL DISEASE.

Read before the Philadelphia County Medical Society, February 24, 1875.

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Pennsylvania Hospital.

DURING the winter of 1857-58, the last of my attendance on lectures, I was a frequent visitor to the clinics at the Wills Hospital, where the ophthalmoscope was just then coming into use. But so recent had been its introduction into this city that no one of the then members of the staff could be considered, in the sense now attached to the word, an expert in its use, while there were only one or two who habitually had recourse to it in the examination of the eye. Any one at all familiar with the service of that hospital now, knows how great a change the lapse of a few years has brought about, and how much the ophthalmoscope is at present relied upon in the diagnosis of ocular diseases. I mention the circumstance only to show how short a time the instrument has been in the hands even of ophthalmologists, and in the hope that, since the advantage which is gained from its use by the specialist is admitted by all, I may succeed in proving to those who hear me to-night that the general practitioner needs only to be thoroughly familiar with its use to find it a great aid in the diagnosis of various forms of disease, and especially of cerebral affections. Notwithstanding the published observations of Drs. Hughlings Jackson and Clifford Allbutt, of England, and of various Continental writers, the number of physicians in general practice in this city who have even a fair knowledge of the changes brought about by disease in the appearances of the fundus of the eye is still small.

Unquestionably, a part of this indisposition to use the ophthalmoscope comes from a belief that more difficulties are connected with the examination of the eye than actually exist. There are difficulties, it is true, but these are not greater or more numerous than can readily be overcome by any one who, fully impressed with the importance of the subject, is willing to sacrifice a little time in studying the art of using the instrument. Another objection frequently made to the ophthalmoscope is that it simply confirms the existence of disease which was suspected before, and that it throws no light upon its nature or location. I will cheerfully admit that there is some truth in the latter part of this objection. Many observers make a distinction between the swelling of the disks resulting from congestion in consequence of some obstruction to the return of blood from the eye, and that which is caused by descending optic neuritis. Other ophthalmologists of equal eminence deny that it is possible to recognize this difference during life. In fact, it is doubtful whether there is not in all cases of

so-called choked disk dependent upon congestion, if of long standing, more or less optic neuritis, so that all that can be truly said is that the existence of an appearance of exudation in the swollen disk early in a case indicates optic neuritis rather than simple choking.

Before advancing farther into my subject, it may be well to pause for a few moments to explain what is meant by a choked disk. In a normal eye the optic papilla is on a level with the retina, immediately surrounding it, and is well defined by the sclerotic ring. The retinal vessels which enter the eye with the nerve bear a definite relation, as regards size, to one another, the veins being slightly larger than the arteries. When choking of the disk exists, the ophthalmoscope shows it to be swollen and to project into the cavity of the eye. The veins become large and tortuous, curving over the sides of the disk, the outlines of which are, in marked cases, wholly lost. The disk presents a striated appearance, which is due to swelling of the nerve-fibres. If neuritis is present, there will be seen, in addition to these appearances, an exudation of lymph, concealing portions of the vessels. The choking of the disk is, therefore, to be regarded as an indication that there is an impediment to the return of blood from the eyeball. A variety of opinion is still entertained in regard to the pathological conditions giving rise to choking of the disk. The fact has already been alluded to that many regard it as the result of descending neuritis. But this explanation will not meet all cases. In a certain number of instances it appears to be almost certain that the inflammation is the consequence and not the cause of the choking. Benedikt believes that its exciting cause is an irritation propagated from some point in the brain which is the seat of disease,—a tumor, for instance,—through the vasomotor nerves to the vessels of the disk. The more generally received opinion appears to be that it is the direct result of pressure, either, as it is held by some, upon the sinuses of the cranium, or, as it is thought by others, upon the sheath of the optic nerve. The pressure of a tumor or of inflammatory products upon the cavernous sinus of either side would cause a retardation of the flow of blood, not merely upon the affected side, but also, in consequence of the free communication between the sinuses of the two sides, upon the other. The compression of the sheath of the optic nerve would give rise to an accumulation of the arachnoid fluid, which would in its turn react upon the veins. The choked disk is, therefore, a congested disk. It matters little whether the cause of the congestion is seated in the brain, or whether it is local, as in neuritis. The congestion once produced is very apt to be increased by what Gräfe has called the "multiplying action" of the sclerotic ring, which, closely embracing the nerve on all sides, acts as a constricting cord around it. It can be readily understood, therefore, that in cases where exudation or effusion has taken place into the nerve, an enormous pressure will be brought to bear upon it where it passes through the sclerotic ring.

I have not attempted as yet to answer the objection made to the use of the ophthalmoscope in medical cases, that it never reveals the existence of disease which has been unsuspected before. It is certainly true that the diagnosis in many cases of cerebral disease may be correctly made without it. But, even if this were always the case,—and I believe I shall be able to show that it is not,—it can hardly be advanced as a valid reason for never having recourse to it. Similar reasoning would deprive us of the aid of the stethoscope in those cases of disease of the heart or lungs in which the general symptoms are alone sufficient to enable us to arrive at a correct conclusion. I have intimated that the ophthalmoscope enables us to detect disease which would escape discovery without its use; and I shall now bring forward, as evidence in support of this position, a case which I found in the women's medical ward of the Pennsylvania Hospital when I took charge of it on the 1st of November of last year. I shall illustrate this paper almost exclusively by the histories of patients who have been under my care during the last few months.

Case I.—Catherine C. was admitted into the medical wards of the Pennsylvania Hospital on October 12, 1874. She is an American by birth, but of Irish descent. She is 42 years of age, single, and a sempstress by occupation.

The patient's history, which was obtained shortly after her admission, is as follows. She has always had good health up to within a year, when she took cold, accompanied by great difficulty of breathing through the nose. At this time she suffered also from what she called neuralgic pains in the forehead; although it is probable these were really caused by the extension of the catarrh into the frontal sinuses. There was also pain at the vertex, but in all other respects she was perfectly well.

In June last she began to lose her hearing, and she states—but this is believed to be incorrect—that in the course of a few weeks she became absolutely deaf. Later symptoms were tinnitus aurium, unsteadiness of gait, pains in the limbs, impairment of sensation in the legs, vertigo, and occasional attacks of nausea. She has never had any loss of power in the limbs, and never any muscular trembling.

On the 1st of November, when I took charge of her, the following additional notes were taken:

The patient has a tendency, when walking, to fall forward and to the right, and on several occasions has actually fallen. Attacks of vertigo also occur in the erect position, and these are almost sure to be induced if she closes her eyes. She is, however, entirely free from them while in bed. She complains bitterly of the pain in her head; this is generally referred to the vertex, but sometimes to the forehead immediately above the eyes. Another annoying symptom is noise in the head. This she compares to the sound made by an engine in letting off steam. It is paroxysmal, being most intense in the morning upon first getting up, and being increased by any cause which brings on the vertigo. She occasionally suffers from nausea, but never vomits. There is no loss of power in the limbs, no paralysis of any of the cranial nerves, and, at present, no disturbance of sensibility. She is deaf, but not absolutely so, and, moreover, can hear better at some times than at others; the deafness being greatest when the vertigo, pain, and noise in the head are most distressing. She says she can hear me better than the resident and other gentlemen who accompany me in my visits to the

hospital;* and such appears to be the fact. To make her hear at all, it is necessary for the speaker to stand in front of her, which enables her to watch his lips closely. No evidence of thoracic or abdominal disease can be detected, and her appearance when seated does not indicate the existence of serious disease. Temperature, pulse, and respiration normal. She states that she applied some time ago for relief from her deafness to a prominent aurist of this city, who punctured the membrana tympani of the left ear, but that no improvement to her hearing resulted from the operation. Her gait is so unsteady, in consequence of the vertigo, that she was thought by at least one physician who saw her before she came under my care to be suffering from locomotor ataxia. But the unsteadiness evidently does not depend upon a paralysis of the co-ordinating power. No history of a syphilitic infection can be obtained, nor is there any reason to suspect it.

November 11.—Dr. Bertolet was kind enough, at my request, to make an examination of the patient's ears, from which it was discovered that there was slight retraction of the membrana tympani on both sides, but no perforation was detected. The Eustachian tubes are pervious.

November 13.—An ophthalmoscopic examination of the eyes was made to-day, and with the following results:

Right eye.—Outline of disk indistinct; on inner side they cannot be made out at all. Veins enlarged and tortuous, curving slightly as they pass over margins of disk, which is prominent.

Left eye.—Changes more marked. Outline of disk, which is more prominent than that of other eye, obliterated. Veins much enlarged, and curved at margin of disk, which is redder than normal; vessels not usually seen being distinctly visible towards its outer side.

December 10.—There has been a marked improvement in the patient's health since her admission into the hospital. Attacks of vertigo, however, although less frequent than before, still occasionally occur; but she considers herself better, and seems to hope that she will eventually get well. The ophthalmoscopic appearances are, moreover, less marked. She uses convex glasses when reading or sewing, but did not complain of any defect of vision before the examination of the eyes. The treatment consisted at first in the administration of tonics, which were replaced, after I took charge of the case, by the iodide of potassium in ten-grain doses three times a day.

The examination of the urine, which has been repeatedly made since her admission, furnishes only negative results.

This patient, previously to coming under my care was believed to be suffering from progressive locomotor ataxia. The association of vertigo, headache, and noises in the head, with deafness, suggested to Dr. Bertolet, who happened to be in the ward very shortly after I took charge of it, the possibility of the existence of Ménière's disease; but if this pathological condition is really present it is not sufficient to explain by itself the choking of the disk, which I believe is caused by some interference with the flow of blood within the cranial cavity. None of the cranial nerves are paralyzed in this case, and all the symptoms except the choking of the disk could be referred to Ménière's disease, the principal pathological lesion in which is believed to be an effusion into the semicircular canals. Dr. Knapp has stated

* This is probably due to the fact that, as was first pointed out by Dr. Knapp (Archives of Ophthalmology and Otology, vol. ii. No. 1, p. 204), certain notes are better heard than others by patients suffering from Ménière's disease.

his conviction, in an able article in his *Journal of Ophthalmology*, that there is, in addition to this, a morbid condition of the cochlea. But, unfortunately, these are mere hypotheses, unsustained fully, as yet, by post-mortem examinations. I cannot find, moreover, the records of many ophthalmoscopic examinations in this condition, and it may, therefore, possibly turn out that the appearances of the eye, which I am now inclined to look upon as peculiar, are not unusual. At all events, there is in the case a lesion different from that which is generally supposed to exist in Ménière's disease, which I think could have been discovered only by the ophthalmoscope. Its discovery has made me more cautious in my prognosis, and has induced me to change the plan of treatment I had at first adopted.

It is in the early stage of cerebral disease that I believe the ophthalmoscope will be found most useful. In illustration of what I mean, I will refer to a case which came under my observation a few years ago, and in which violent supra-orbital neuralgia was the only prominent symptom. The various remedies usually prescribed in this disease failed to give the slightest relief from pain. No suspicion of syphilis appears to have been entertained at any time while the patient was in the hospital, and nothing in her history indicated the existence of this disease; consequently, no specific treatment was adopted. A year later, she returned to the ward paralyzed on one side, when it was accidentally discovered that she was the subject of constitutional syphilis. There can be little doubt that had an ophthalmoscopic examination been made when she was first admitted such an alteration in the disks would have been discovered as would have enabled us to recognize the presence of serious organic disease of the brain, and perhaps to have averted the accident which subsequently occurred. This, it may be said, is a mere assertion; but it is one which my experience, strengthened as it is by that of others, justifies me in making. We have, therefore, in the ophthalmoscope a valuable means of distinguishing organic from merely functional diseases, and of detecting the former at a time when a well-directed treatment is most likely to result in a restoration to health. It is at precisely the corresponding stage of pulmonary or cardiac disease that the stethoscope renders us the most efficient service.

The next case I shall introduce illustrates to some extent the value of an early ophthalmoscopic examination where there is a doubt as to the existence of inflammation of the meninges. The patient, a young colored woman, was unquestionably suffering, at the time I first saw her, from spinal meningitis, but, although some of the symptoms indicated that the inflammation had extended up into the cranial cavity, this was not positively ascertained until after the examination of the eye. At the time of writing, she presents absolutely no cerebral symptoms; but the persistence of the choked disk when taken in connection with the history of the case would reveal its nature to any one conversant with the use of the ophthalmoscope.

It is only proper to add that she would hardly

put her physician on the right track by complaining of any defect of vision, as she was unaware of its existence until her attention was called to it by my questions.

Case II.—Ellen C., æt. 18; single; born in Virginia; colored; was admitted into the medical wards of the Pennsylvania Hospital, October 25, 1874.

The patient's health, previous to the present attack of illness, has always been good, and she has no hereditary predisposition to disease. Two weeks before admission, after having been exposed to cold, she had a chill, followed by headache, diarrhoea, and pains in the lumbar region. She appeared to have had at this time some cutaneous hyperæsthesia, and also distressing pains in her arms and legs, but more particularly in the latter. These, which she attributed to rheumatism, were followed a few days later by great tenderness on pressure along the spine. This was a very marked symptom, pain being caused whenever she lay upon her back. She has suffered pretty constantly from headache, but it has, fortunately, been of only moderate intensity and dull in character.

On admission, the patient had fever, furred tongue, and a somewhat tympanitic abdomen; she had pain, with rigidity at the nape of the neck, and general tenderness upon pressure along the spine. There was decided retraction of the head, and some stiffness of the jaws. The movement of the arms or legs gave rise to a good deal of pain. There was also apparent loss of power in them. She complained of a "painful feeling" in the eyes, and of some tinnitus aurium, but her sense of hearing was unimpaired.

On November 1, the patient came under my care, when the following notes were made: "The retraction of the head still continues, and an attempt to raise it from the pillow gives rise to much pain. By persisting in the attempt not only the head will be lifted, but the shoulders also. Tenderness along the spine and pain on motion are still complained of, as is also headache. This, however, has diminished in intensity, and is now no longer constant. The tongue is moist, but slightly furred, the bowels are constipated, the appetite is poor, the grip of both hands feeble, especially that of the right side. She does not vomit, and she can move her legs much more freely than when admitted. There is some fever present.* The pulse and respiration are both more frequent than normal, but only moderately so."

November 18.—There has been a marked improvement in all the symptoms. Although she is still indisposed to move her legs when asked to do so, she has been seen on at least two occasions to leave her bed,—once to shut the door of the ward, and once to look out of the window at a passing procession. She is able to move her head freely, and can now open her mouth without difficulty. There has been at no time either retention or incontinence of urine, and at all times perfect control over the sphincter ani. A slight convergent strabismus on the right side was, however, noticed to-day for the first time, and an ophthalmoscopic examination of the eye showed that there was choking of the disks.

November 26.—Patient sitting up to-day for the first time. A slight ptosis on the right side is observed, together with a good deal of trembling of the orbicularis on both sides. Shortly after date of last note she told us she saw double; but this appears to be no longer the case. She walks moderately well, but staggers a little, this being apparently due to her want of strength rather than to paralysis. She complains a little, when

* The thermometer indicated a temperature of 102° on the evening of her admission, and one of 101° on the day following her admission. Since then her temperature has never been above 100° in the evening and 99° in the morning.

asked, of dimness of vision, but she is able to see well enough to do plain sewing.

November 30.—A close examination of the eyes shows that, in addition to the slight ptosis, the right eye cannot be moved as freely upwards as the left.

December 11.—Improvement continues. An ophthalmoscopic examination was made to-day, and with the following results: left eye, disk prominent, but a physiological cupping can still be seen; outline very indistinct on outer side; the vessels covered in places by exudation; the veins swollen and tortuous. Right eye, the same description will answer, but the changes are less marked. Patient's temperature is now normal, but it continued slightly elevated until the 29th ult., being, usually, 99° in the morning, and 99.5° in the evening, for the last three weeks. The treatment consisted at first in the administration of quinia, gr. xx daily, with a small quantity of opium. When I took charge of the case, I gave, in addition to these, ten grains of iodide of potassium. Believing that a dilated condition of the vessels of the membranes had been left by the inflammation, I replaced the latter on November 19 by thirty minims of the fluid extract of ergot, which was continued for two weeks, after which I resumed the administration of the iodide.

The next case which I shall report is one in which the ophthalmoscope simply confirmed the diagnosis which was made before it was used. The loss of the vomer and the presence on the face of cicatrices left by a previous eruption establish the fact, in spite of the patient's assertions to the contrary, that she is suffering from constitutional syphilis, while the headache, facial paralysis, and convergent strabismus, which were all present at one time, render it certain that she has a gummatous tumor of the brain, so situated as to press upon the sixth and seventh nerves of the right side.

The absence in the fourth case of any marked changes in the fundus of the eye renders the existence of a cerebral tumor, or of any other disease usually accompanied by choking of the disk, more than doubtful. There is probably present in this case an atheromatous condition of the small arteries of the brain, and, possibly, commencing sclerosis,—an opinion which is confirmed by the history, and by the facts that there is disease at the aortic orifice and that the radial arteries are hard and unyielding.

Case III.—Mary W., æt. 32, married; Irish; a housekeeper; was admitted into the medical wards of the Pennsylvania Hospital, October 9, 1874.

The patient's history previous to her admission is substantially as follows. She has been married ten years, but has never borne children. She states that her husband is and has always been a perfectly healthy man, and she stoutly denies the possibility of ever having had venereal disease. Her own health was good until two years ago, when, after taking cold, she began to suffer from a nasal discharge, which has persisted up to the present time. The discharge was thin and "natural" at first, but afterwards became thick and offensive, but she is not aware that any bone ever came away. About a year ago, she was seized with pains in the temples and forehead. These have continued until the present time, though worse at some times than at others. She has also had a good deal of tenderness of the scalp in the painful regions. Other symptoms from which she has suffered are vertigo, dimness of vision, and slight deafness on the right side.

On admission, the patient complained of pains in

the temples and forehead, and soreness of the scalp in those regions. She was pale, was without appetite, and in a very prostrate condition. Upon examination, it was found that the septum of the nose had disappeared. She had a peculiar expression, due partly to flattening of the nose from this loss of the vomer.

November 1.—On the 23d ultimo it was noticed for the first time that her face was drawn slightly to the left, and that her tongue, when protruded, was deflected towards the right side. The pain in the head still continues; it is described as sharp and shooting in character; it never extends to the occiput. She has vertigo, especially after any unusual movement; slight convergent strabismus of right eye, dimness of vision, but no diplopia. The facial paralysis still persists, and so does the deafness, but they are both slight in degree, no deviation of the palate being detected. There is slight loss of power in the right arm, but no diminution of sensation in any part of the body.

The cicatrices left by an eruption evidently rupial in character are plainly seen upon the forehead.

November 21.—Headache persists, in spite of the use of the bromide of potassium in large doses. An ophthalmoscopic examination of the eyes showed optic neuritis, with hemorrhage in the retina.

December 3.—Patient has had an acute attack of pleurisy. It ran its course without effusion, and it has left her, apparently, in very much the same condition as before.

December 11.—The ophthalmoscopic examination was repeated to-day, with the result of showing a slight improvement in the condition of the eyes. The appearances of the left eye, which is the most diseased, are briefly as follows. Disk prominent, veins enlarged and tortuous, outline of disk indistinct, but can be made out. Redness of disk less than when first examination was made. Hemorrhagic spot just above disk, and one near macula, but these are fading. Numerous white spots on retina, indicating probably the seat of former hemorrhages.

The patient's treatment at first consisted in the use of iodide of potassium, ten grains, with a small quantity of the bichloride of mercury (gr. one-twelfth), three times a day. In consequence of the severity of the headache, the dose of the iodide was increased to twenty grains thrice daily, while that of the bichloride was diminished to one-twenty-fourth of a grain. Under this treatment a rapid diminution in the intensity of this symptom has taken place, while there is some improvement in the other symptoms. The facial paralysis is much more marked on some days than on others, but it is never entirely absent. The patient's general health has also improved, in spite of the administration of the large doses of iodide of potassium, which has given rise to a pustular eruption principally upon the back. During the attack of pleurisy she took Niemeyer's pills, in addition to the medicines just referred to, it being thought imprudent to intermit the specific treatment.

Case IV.—Ann T., æt. 65; born in Ireland, but a resident of this country for thirty-seven years; single, and a domestic servant by occupation; was admitted into the medical wards of the Pennsylvania Hospital, May 29, 1874.

The patient presents a good family history, and enjoyed fair health, with the exception of occasional attacks of giddiness, until about three and a half years before her admission, when she was suddenly seized with vertigo without loss of consciousness. Upon recovering from this, she found she had incomplete paralysis of the left arm and leg. She states that she did not recover the use of these limbs for two years, and was unable during this period to do any work for her support. About a year and a half ago she was under

treatment in this hospital for vertigo, and "bad feelings" at the back of the head; she left improved, but not entirely relieved of the symptoms. One week before her present admission, she was suddenly taken, while lying in bed, with intense pain in the right arm and leg, accompanied by spasm of all the muscles of the right side. The spasm lasted three or four days, and was followed by partial paralysis of the right arm and leg. She has never had any loss of memory for words, and never any impairment of sensation in the limbs until after her admission. When admitted she was scarcely able to move either the right arm or leg, and had to be carried into the ward. She also suffered in a great degree from restlessness and insomnia. Her urine was found to be acid, to have a specific gravity 1016, and to be free from albumen.

November 1.—The patient is pale and worn-looking. There is loss of power in the right leg and arm, but she is able to use both to a certain degree; there is also marked general tremor, which is increased during voluntary movements. There is no trembling of the head when she walks, no nystagmus, and no scanning of the words when she speaks, as is said to occur in the condition described by M. Charcot under the name "*sclérose en plaques disséminées*." She still suffers a good deal from vertigo, and occasionally from headache. The examination of the heart shows that its action is feeble, and that there is a systolic murmur at the right base followed by an indistinct second sound. There is no constipation, and no paralysis of the bladder or rectum. An ophthalmoscopic examination does not reveal the existence of any actual lesion, but the disks are not so well defined as usual, and present rather a "dirty" appearance.

It is hardly necessary to recapitulate the treatment employed in this case, as it has been various, and seems to have exercised in no degree a controlling influence over the malady.

In addition to these cases I will refer to two others which were under my care last winter, and which are fully reported in the *Philadelphia Medical Times* for January 17, 1874.

In one of these—Case I., in the communication just alluded to—there was dilatation of the right pupil, convergent strabismus on both sides, headache, vertigo, loss of power, and a diminution of sensation. The ophthalmoscope revealed the presence of marked optic neuritis and of some retinal changes. Under the use of the iodide of potassium there was some improvement in the patient's condition. The symptoms here were attributed to lead-poisoning, the patient having been in the habit for some time previously of using white lead as a cosmetic.

In the second case the patient was discovered to have made the same use of lead. At first colic was the only symptom of poisoning, but eleven days after her admission she had, without any premonition, an epileptiform convulsion. This was followed by a second in about sixteen hours, and by a third five hours later. A fourth took place three hours after the third, and was fatal. There was nothing previously to the occurrence of the convulsions to draw attention to the eyes, or indeed to the brain, and consequently no ophthalmoscopic examination was made until just before death, when, however, marked changes in the fundus of the eyes were discovered. There can be no doubt that had such an examination been made immediately after the admission of the patient we should have been better

prepared for the severe cerebral symptoms which subsequently supervened, and which I confess I was at first disposed to look upon as a manifestation of an hysterical diathesis.

Before concluding this paper, which has outgrown its intended length, I shall refer to a recent paper by Annuske,* to show the frequency with which alterations in the disk accompany cerebral tumors. This distinguished observer has collected two hundred and seventy-six cases of cerebral tumors in which the post-mortem examination fully confirmed the diagnosis made during the life of the patient. In only forty-eight is there any record of an ophthalmoscopic examination, and in one of these the result of the examination is not given. In the remaining forty-seven cases, white atrophy occurred eight times, neuritis of one side only once, and double neuritis thirty-three times.

Atrophy, he goes on to say, is generally the result of previous neuritis, although he admits the possibility that simple atrophy, from intra-cranial growth, may occur; but this has never been demonstrated. He therefore regards optic neuritis as a constant symptom of cerebral tumors, and as a rule it is a very early one. "Its occurrence with other intra-cranial affections cannot be considered to greatly invalidate its importance as a symptom of tumor. On the one hand the other intra-cranial affections which are likely to give rise to neuritis can (exceptional cases aside) only temporarily cause error in diagnosis, since their other symptoms characterize them as acute diseases, while tumors, though often exciting acute symptoms for a time, follow in general a chronic course. On the other hand, such intra-cranial affections as are likely to be confounded with tumors from their general symptoms and course (chronic encephalitis, softening, and cerebral abscess) never excite optic neuritis." "Reich (*Monatsbl. f. Augenheilk.*, June and July, 1874)† gives further statistics of intra-cranial growths, which confirm, in the main, those of Annuske, though they make the proportion of cases in which optic neuritis is wanting somewhat greater. Of eighty-six cases not included in Annuske's tables, there was ophthalmoscopic examination in forty-five. In forty-one of these there was double optic neuritis, or atrophy ex neuritide; in one, neuritis of one side; in three, no change in the disks."

Taking all the cases given by both writers (92), there was in 95.65 per cent. optic neuritis or atrophy ex neuritide; in 93.5 per cent., double; in 2.15 per cent., single; in 4.35 per cent., no ophthalmoscopic change.

I could add other cases to those just detailed in support of the position I have taken in regard to the ophthalmoscope, but the records of cases are very apt to be wearisome, and I have therefore preferred to report in full only those cases which were under treatment in the ward when I took charge of it, and in which no previous examination of the eye had been made. I think I have shown that the ophthalmoscope materially assisted me in arriving at a

* Boston Medical and Surgical Journal, November 5, 1874, from Gräfe's Archiv, xix. 3.

† Boston Medical and Surgical Journal, November 5, 1874.

correct conclusion in some of them. A point to which it may be well to draw attention is that in none of these cases was there complaint of much impairment in vision. Had this been the case, the patients would probably have sought relief at a dispensary for diseases of the eye. In this way the ophthalmologist and the general practitioner, unless they work together, will see very different classes of patients.

PURPURA HÆMORRHAGICA IN A CHILD SUCCESSFULLY TREATED BY THE HYPODERMIC USE OF ERGOTIN.

Read before the Northern Medical Association.

BY ANDREW K. MINICH, M.D.

THE child, Philip G., aged 7 years, complained of feeling unwell a few weeks before I was hastily summoned. He is the son of German parents, both of whom have always enjoyed good health. His mode of life and the hygienic conditions have always been good, so that his disease was not due to a want of proper food, air, clothing, etc.

I found the family in great alarm, and, as I looked at the boy, pale as death, with blood upon his bed and clothing, and blood streaming from both nostrils and issuing in large quantities from his mouth, I felt they had abundant cause. It seemed as though the child was a leaky blood-vessel: blood was issuing everywhere. It passed with his urine, it oozed from the lining of his mouth, it infiltrated the parotid glands until they were distended almost to bursting, it pushed its way to the skin, as shown by numerous small ecchymoses and about twelve large, purple, irregular blotches upon his body, about the size of a peach-leaf. They were more numerous upon his arms and legs.

The attack came on suddenly, though, from the previous history, the bleeding was probably but the last symptom of a disease which had its beginning when the child first began to complain.

When I first saw him, his skin was cool and dry, save his forehead, upon which sweat-drops stood out. Pulse 108, temperature 97½°.

One grain of ergotin was at once injected under the skin of the arm. Sponging with infusion of oak-bark was also ordered. Four hours afterwards (evening) the profuse vomiting of blood had entirely ceased, but the blood was still issuing from one nostril. One grain of ergotin again administered hypodermically. Pulse now 108, temperature 98°.

The next morning, bleeding had entirely ceased. Urine was still dark-colored. Rubbing of the nose started blood from one nostril. Gave another injection. Sponging continued. Pulse 106, temperature 98½°. The small spots have almost entirely disappeared. Half a fluidrachm of fluid extract of ergot, five drops of dilute sulphuric acid, and four drops of deodorized tincture of opium were ordered to be given every two hours.

Morning of third day.—Hemorrhage entirely ceased. Urine muddy, but free, apparently, from blood. Parotids very much swollen. Child had slept well during the night, is very feeble. Pulse 108, temperature 98½°. Large spots are beginning to fade. Medicine to be given every four hours. Also ordered wine, and a pill consisting of quinine, iron, and strychnia. His bowels moved to-day, for the first time since the attack. The passage was quite profuse, consisting of dark, hard, bloody lumps. Unfortunately, none of the bloody urine could be collected, as it was passed unconsciously.

The following is the report which Dr. John Haynes kindly sent me from a specimen obtained upon the fourth day: "Urine muddy; large white sediment, com-

posed of crystals of uric acid and amorphous phosphates. Specific gravity 1026. No albumen; no pus."

Fifth day.—Child is doing well: eats well, sleeps well, feels well, looks well. Ergot discontinued. Tonic pill still administered.

Seventh day.—The child is up and playing about the room. He is gaining in strength, color again returning to his cheeks. The large purple spots have changed to a very faint greenish-yellow.

Remarks.—This case is one of interest in more ways than one. Its rarity, as occurring in a child, is an interesting feature. Many practitioners have never met a case. Dr. West, in an extensive practice among children, saw, I believe, but six cases. Dr. John Forsyth Meigs, enjoying, without doubt, the largest practice in this city in this special field, in answer to a note of inquiry informs me that he remembers but two well-marked cases in patients under ten years of age. In these, there was hemorrhage from the nasal passages, gums, and kidneys. Both cases ended in recovery. He also states that he remembers, indistinctly, several other cases, but cannot specify about them.

Recently, three cases, to my knowledge, have occurred in the upper section of the city. One was reported in the *Philadelphia Medical Times* by Dr. Boisnot, in which transfusion was instituted and the child thereby saved. Another occurred in the practice of Dr. William Bennet, and was reported at a meeting of the Episcopal Hospital Club. His patient, who died, was an infant at the breast. Blood issued from its mouth, nose, and bowels. The purple spots or blotches were also well marked. The other is the case which has called forth this paper.

In speaking to some physicians about cases of this character and their treatment, a number suggested vegetable diet. Evidently they confounded this disease with scurvy. There is a broad line separating the two. Scurvy comes on slowly, purpura very often suddenly. Scurvy has for its cause a want of a variety of diet; purpura is independent of this. Scurvy has its chief and constant symptom in a softness and sponginess of the gums, with blood oozing from its mucous covering. Purpura has not, and the hemorrhage is very often general. Scurvy will be cured by correcting the diet. Purpura will be very little influenced by this alone.

Purpura is generic in its signification, and one must distinguish between its species or varieties. *Purpura urticans*, or the nettle-rash purpura, commences with the formation of elevations like the eruption of nettle-rash, though without the accompanying irritation of urticaria.

Purpura senilis occurs, as its name implies, in the aged, more frequently in women. It is oftener seen upon the arms than elsewhere. It is probably due to severe local irritation, and usually lasts for a long time,—sometimes for years.

Purpura simplex is characterized by the appearance of small purple spots, and is associated with great lassitude and languor and general symptoms of mal-nutrition.

These three forms of purpura are not considered dangerous. The fourth variety is the *purpura hæmorrhagica*, the symptoms of which were offered in

this case. Unlike the other members of this group, it must always be considered a dangerous disease, especially in children. Patients may die from exhaustion, from either external or internal hemorrhages.

Its pathology is still unsettled. Some regard it as a fatty degeneration of the capillary vessels; others believe that the fault exists in the blood.

In Dr. Bennet's case, fatty cells were found in abundance in the liver and kidney tissues. A specimen of blood obtained from my case the seventh day was sent to Dr. Morris Longstreth, which he kindly examined. This is his note: "The blood was quite dry when I arrived home. There was nothing found, however, after treatment, to justify me in pronouncing the blood, from its microscopical appearance, other than normal. It clotted firmly, and corpuscles were seen separated into masses. There was no excess of white corpuscles that I could detect." I would here state that in the vomited blood small clots existed.

The greater interest of the present case is in connection with its treatment. It was formerly the practice to rely upon oil of turpentine, which was, and is still, highly lauded. How it acts we do not know. Since the pathology of purpura is unknown, its treatment is, of course, experimental. We treat a symptom when the patient's life or comfort demands it, no matter what processes underlie it. This is pre-eminently so in purpura. Though hemorrhage may not be the disease, it is the wave upon which the patient's life is borne away, and it behooves us by the bedside to lay aside thoughts concerning the ultimate cause of the flow, and adopt measures to stem the tide.

We have (thanks to the deeply-searching spirit of modern investigations on the physiological action of drugs) one remedy upon which we can assuredly rely in this disease. I refer to ergot. The experiments of Holmes, Wernich, Kersch, and Vogt upon animals confirmed the theory advanced by Courhant in 1827, that ergot produces contraction of the blood-vessels. In man, Nicol and Mossop have observed with the ophthalmoscope the contraction of the retinal vessels after the administration of ergot.

Since the publication of their experiments, ergot has been extensively used, both internally and hypodermically, to arrest bleeding, and, I believe, with almost uniform good results.

I thought that I was the first to employ ergotin hypodermically in purpura, but a medical friend has called my attention to a case reported in the second volume of the *British Medical Journal* for 1874, p. 304. Dr. W. L. Lane there details the history of a girl aged 16, convalescing from typhoid fever, in whom purpura hæmorrhagica manifested itself. He injected one grain of an extract of ergot, which had, he states, the effect of completely arresting the flow of blood.

What is the relation between ergot and purpura hæmorrhagica? We know that purpura is not a self-limiting disease, like the continued fevers, which will recover simply through nature again "asserting herself." Its tendency is towards

death. It is not, so far as I know, associated with fever. It may exist incidentally. The temperature of our case was below the normal, being $97\frac{1}{2}^{\circ}$ at the outbreak, and rose gradually as convalescence advanced. If the disease is in the blood, if it lacks the proper proportion of constituents, why will ergot cure a case? What restorative power can ergot have upon the blood? None.

If purpura is a fatty degeneration of the capillaries, why will one or two injections of ergotin cure? What influence can ergot have upon the formation of fat-cells? We do not give ergot in fatty degeneration of the heart, liver, or any other viscus. Ergot produces *vaso-motor spasm*. The capillaries contract by this stimulation of the vaso-motor nerves. May not purpura hæmorrhagica belong to the neuroses? May it not be a *vaso-motor paralysis*? Such a condition would permit the capillaries to dilate, widening the interstices in the tissues of the capillary walls, thus forming channels for the blood to ooze through. Since theory alone has had to deal with the nature of this disease, this seems to me a more rational view. Regarding purpura hæmorrhagica, then, as a *vaso-motor paralysis*, we have explained to us somewhat satisfactorily how it is that ergot will cure this affection,—cure it by promptly closing up the ten thousand avenues through which the patient's blood and life are ebbing away.

2228 NORTH FRONT STREET.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

Abstract of a clinical lecture on Diseases of the Skin, delivered at the University Hospital, April 13, 1875, by Louis A. Duhring, M.D., Clinical Professor of Diseases of the Skin.

Reported by ARTHUR VAN HARLINGEN, Chief of the Skin Clinic.

ECZEMA COMPLICATED WITH RHEUMATISM AND FOLLOWED BY SEBORRHOEA.

C., MALE, 22 years of age, had been under treatment in the ward for some time with generalized eczema, assuming on the body the characters of the erythematous form of the disease, while on the scalp the pustular form prevailed. The affection was of a peculiarly violent type, and had been under treatment for about two years. Some time after his admission to the hospital, the eczematous affection was observed to disappear suddenly and almost completely.

Some trouble was supposed, and, as the event proved, with reason, to be impending, for a few days later an attack of acute rheumatism supervened, which lasted some weeks. During this time the eczema scarcely showed itself; no attention was paid to it. Recently, however, the patient has recovered from his rheumatism, and the skin-affection again demanded treatment. While the patient was passing around for inspection, Dr. Duhring drew attention to the condition of the scalp. Eczema was no longer present, but in its place a new affection,—seborrhœa. The scalp is not, it may be observed, red and inflamed, but pale. It is covered with thick, pearly-gray scales, not so fine and dry as those of eczema, but larger, and attached more or less closely to the hairs. If some of these scales are picked off, the skin underneath will be seen to have a peculiar moist look, and a leaden color which is quite characteristic.

The present tréatment will be as follows: The scalp is to be cleansed thoroughly morning and evening by the use of *sapo viridis*, the well-known "green soap," which contains an excess of potassa. After this has been thoroughly washed out, the following ointment is to be well worked into the scalp in small quantities, avoiding so far as is possible smearing the hair:

R Hydrarg. oxid. rub., gr. v;
Glycerinæ, ʒi;
Adipis, ʒi.—M.

Under this treatment the patient rapidly recovered, and was discharged from the hospital.

MILIARIA.

A. B., child six months of age, presents an eruption confined to the back and chest, consisting of minute pin-point and millet-seed sized vesicles, upon an inflamed base. The vesicles are in all stages of formation; some contain a clear, others a puriform fluid. They are very numerous, scattered over the surface, not grouped, but discrete, and showing no tendency either to coalesce or to rupture. They present a transparent, yellowish appearance, surrounded by a hyperæmic condition of the skin. In addition to the eruption the child is seen to be very much bundled up in clothes, and in a state of perspiration.

The affection before the class, Dr. Duhring said, was one involving the sweat-glands; a simple disorder produced by excessive and disordered action of these organs, and known as *miliaria rubra*. There are two kinds of miliaria; one, unattended with inflammatory or hyperæmic symptoms, and known as *miliaria crystallina*, in this country also as *sudamina*; the other, accompanied by marked signs of glandular and cutaneous disturbances, *miliaria rubra*. *Miliaria rubra* is quite a common affection in children, and its treatment is simple. In order to assuage the heat of the skin, dusting with powdered starch may be practised, and the vesicles may be broken open and destroyed by rubbing with soap and water.

XANTHOMA.

M. L., a dark-complexioned woman of 45, apparently in fair health, but with some eczema of the fingers. The skin of the face is dusky and rather oily-looking, but perfectly healthy, excepting the eyelids. On the right lower lid is a patch of diseased skin about one-fourth of an inch wide and half an inch long, extending upwards and inwards, and gradually fading away towards the inner canthus. This patch is of a dark canary yellow, very slightly thickened, so that it still allows the finer wrinkles of the skin to be seen in it, and quite level with the surface. On the left upper eyelids three patches of a similar nature can be seen; these are roundish and slightly raised above the surface. They give no pain, and the patient was not aware of their existence until her attention was called to them. They could not have been of more than a few months' duration.

This, Dr. Duhring remarked, was a case of a very rare disease,—*xanthoma planum*. Having once seen it, one is not likely to forget it, as the appearances are quite peculiar, and always about the same.

The affection usually occurs upon the eyelids, but is sometimes found on other parts of the body. Its situation is in the subcutaneous connective tissue, but very superficial. It looks as though it were sunk or inlaid in the skin. Xanthoma was formerly supposed to be connected in some way with disease of the liver, and to be caused by deposit of the biliary coloring-matters in the skin. It is now believed to be entirely unconnected with hepatic disturbance, and to be a simple hypertrophy of the connective tissue, with fatty metamorphosis.

TRANSLATIONS.

ARSENIC IN DIABETES MELLITUS.—Dr. Samuel v. Pap contributes to the *Wien. Med. Presse*, Nos. 13 and 14, the results of his experience in the treatment of diabetes, particularly as regards the use of arsenic in this affection. He finds that this remedy exercises a decided influence in diminishing the pathological excretion of sugar, whether this be due to excessive sugar-formation in the system or arrested metamorphosis of the normal sugar. In many cases the use of arsenic causes the sugar to disappear entirely from the urine; naturally, the various other symptoms of diabetes,—thirst, dryness in the mouth, increase in the amount of urine, weakness, etc. The favorable effect of arsenic is more noticeable in those lighter cases of diabetes where the sugar present in the urine does not rise above 4 per cent. The diminution or disappearance of the sugar takes place even while mixed diet is used, but at the same time it is advisable to use as little starchy food as possible. After the use of arsenic has been suspended, months may elapse before the diabetic condition again makes its appearance; nevertheless, the use of this remedy does not protect against relapse. No unpleasant effects are observed from the prolonged use of the arsenic; the appetite remains unaffected, and even, in many cases, is improved. As a contra-indication may be mentioned the highest grade of the disease with progressing pulmonary tuberculosis.

The arsenic was administered in the form of Fowler's solution, beginning with three drops in twenty-four hours, and gradually increasing the dose to twenty drops per diem.

X.

TOXIC PRINCIPLE OF PUTREFIED BLOOD.—M. Feltz has injected into dogs certain quantities of putrefied blood which had been submitted to certain modifications, either by depriving it of gas or submitting it to the action of compressed air or oxygen. His conclusions are as follows: 1. Septicæmia may be developed in the dog by intra-venous injections of putrefied blood. 2. Long-continued currents of air passed over the blood and compressed air seem to have no action either upon the toxic qualities of the putrid blood or upon the infinitely minute bodies contained in it. 3. The blood, after having been oxygenated a long time by the contact or passage of this gas in a state of purity, seemed to become less toxic, and to differentiate itself from the original blood by a diminution of the movements of the vibriones and spirellæ. The blood, deprived of gas and left in a vacuum for a certain time, appeared also to lose its toxic power. The various minute organisms lost their activity, but did not die.

The toxic principle, according to M. Feltz, is apparently a gas.—*Bull. Gén. de Thérap.*, March 30.

X.

ABLATION OF THE BREAST BY THE ELASTIC LIGATURE.—M. Périer had under his care recently, at the Salpêtrière, an old woman suffering from a tumor of the breast (diagnosed cysto-sarcoma).

This tumor, the size of the fist, mobile and detached by its own weight from the surrounding tissues, was removed by the elastic ligature. The base of the tumor was surrounded by the ligature, the ends of which were then tied under long pins previously introduced. The tumor preserved a red color for a few days, then became blue, and finally fell off. Unfortunately, the patient died two months subsequent to the operation, of erysipelas of the face. The advantages of the operation are the avoidance of loss of blood, more rapid cicatrization than with the galvano-cautery, and the being able to do without anæsthetics.—*Bull. Gén. de Thérap.*, March 30.

X.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

ORAL SURGERY.

SOME months since, there were published in our columns certain editorials upon dentistry which gave rise to a good deal of angry private and semi-public criticism. As an example of much of this, we may be pardoned mentioning that a prominent member of the craft, whose sober opinion ought to be valuable, assured us in a public place, in the most solemn manner, and in the presence of numerous witnesses, that "the day will come when your children and grandchildren will point their fingers of shame at this and say, 'Father, or grandfather, did you write this?'" Finally, the editor of a usually dignified journal was betrayed into publishing an editorial of such a personal character that we could not at the time, consistently with our own self-respect, notice it, so that we let the matter drop. Our interest in the subject has, however, never been lost, and we have read with much pleasure the able debate upon dental education which is contained in the report just published of the special meeting in December of the New York Odontological Society. We have not space for even a fair abstract of this lengthy discussion, but desire to call attention to several points in it. In the first place, it fully establishes the truth of all that has been said in regard to the unworthiness of the dental profession, as it now stands, to rank as a branch of the medical fraternity. Indeed, it does more than substantiate our words.

James Truman, D.D.S., of this city, in the open-

ing address says that to-day "there are from eight to eleven thousand persons engaged in the practice of the profession [dentistry] who have not the degree [D.D.S.], and of whose general intelligence we have no means of knowing. It is very safe to assume that a large proportion are men whose attainments do not extend beyond the mere practical routine of mechanical operations, and a very large number are by no means experts in these directions. Generations must come and go before we can occupy the present favorable position of the medical profession." Later in his speech, Dr. Truman asserts that dentistry at the present time has no claim to be considered a specialty of medicine. Howsoever the dental profession may be divided on this point, we can assure Dr. Truman that the medical profession is singularly a unit in agreeing with him.

Broadly viewed, the gentlemen who took part in the debate were divided into two camps: those who argued that dentistry should exist as dentistry, and those who desired that it is or should be a specialty of medicine. We do not propose here to enter in any way into the discussion of what dentistry ought to be, but merely to point out that it is not at present a medical specialty.

In what seems to us the ablest speech made upon the occasion, Dr. Garretson, of this city, argued in favor of progress. He really expresses the whole gist of the relations between dentistry and medicine in the following sentence:

"Most decidedly am I, for one, in favor of the abolishment of the degree of D.D.S. One degree in medicine is enough; the greater covers the lesser, and includes it. A doctor in medicine possesses a title quite extensive enough in its signification to embrace any specialty that he may elect to practise; besides, it affords the only possible bond of brotherhood with the members of the profession at large. We may be specialists, but we can never be esteemed as doctors, in the desirable fulness of the term, until we replace the D.D.S. with the M.D."

Let editors write as they may, conventions debate, discuss, or pass resolutions as they please, one thing is certain: that D.D.S. is the badge of a partial culture, and that the medical profession never will stultify itself by recognizing as coequal or as a part of itself a profession to the highest positions in whose ranks such a degree is the only necessity for entrance. It may do very well for gentlemen who place only their medical degrees on their door-plates before the world to affirm in convention that they prize the D.D.S. above the M.D., but in doing so they only make themselves singular: they do not affect or reflect the general public opinion. Those

gentlemen who look upon dentistry as belonging to medicine should weigh well the words of Dr. Garretson. On behalf of the medical profession, we freely admit that many, it may be all, of the dentists who took part in the debate at the Odontological Society far exceed, in point of general, literary, scientific, and even in special medical culture, many of our physicians. But that does not affect the question. The medical profession is perfectly willing to admit dentists to its fraternity so soon as they become doctors of medicine, but never whilst they are merely doctors of dentistry. Really, the physicians are, in great part, indifferent in this matter; but just so soon as the universal law of the medical profession—that the specialist shall first be a general practitioner, and shall have no special degree—is complied with, the medical profession will at once assimilate this great new body.

The latter part of the following extract from the speech of Dr. Garretson has an application much beyond that which he made of it:

"It has come most plainly to exhibit itself, not only to ourselves, but as well to the community, that our field of labor does not correspond with our learning, our social position, nor, indeed, with pretensions necessarily associated with a title which we have arrogated to ourselves. We are very wrong in esteeming that in ill temper on the part of certain editors, or in crustiness of disposition on the part of other people, originate criticisms that some of us do not like to hear. The trouble is not exclusively with these; but these rather are as the voices which precede the whirlwind of public opinion; and not to give heed, is to exhibit little more discernment than the foolish ostrich, which, with head and eyes buried beneath the sand, esteems itself free of all danger."

CORRESPONDENCE.

NEW YORK, April 22, 1875.

PROF. SAYRE has lately performed his fifty-fifth and fifty-sixth hip-joint exsections,—both in the same week. The first was made in Brooklyn, in the presence of Prof. Gross and both the Pancoasts of Philadelphia, who chanced to be in town. The case was a desperate one, and ought really to have been operated on two years ago. Dr. Sayre first saw the child, who was seven years of age, about two months before the date of exsection, but had been unavoidably obliged to delay operating from time to time.

During March a profuse and obstinate diarrhoea had set in, and emaciation was now extreme; so that there seemed altogether a very slim chance of saving the little patient; which, indeed, could only possibly be done by operative interference. At the time of the operation he was almost *in articulo mortis*, and at one stage of the proceedings he ceased to breathe, and it

was thought that he was actually dead. Prof. Gross, however, who held the pulse, noticed that the heart did not altogether stop beating. The table was inclined (so as to depress the head) until the completion of the operation; the mouth was constantly moistened with ammonia, and finally the patient began to revive. The destruction of tissue in this case was very extensive.

Dr. Sayre at first thought the acetabulum was not perforated, but soon discovered that it was, and that the head of the femur, already detached, plugged up the large hole through it. When this was removed, an enormous quantity of pus gushed forth; which was exceedingly fetid, from its having been in such proximity to the sigmoid flexure of the colon. There were no less than three sinuses whose external orifices were above Poupart's ligament. We are happy to say that the child began to improve immediately after the operation, and is now doing exceedingly well; which goes to prove the truth of the remark that Dr. Sayre often makes, that his most hopeless cases often turn out the best in the end. He certainly could not wish for a more hopeless one than the above.

The second case was operated on at his clinic at Bellevue College, and on this occasion a patient on whom he had performed exsection of the hip-joint just two months before was presented to the class. The little fellow was certainly wonderfully improved, and the father said he had gained about ten pounds since the operation. He was now taken out of the "wire breeches," in which he had been kept ever since then, and it was found that the lower extremity of the affected side was already quite as long as the sound limb. A long steel splint, reaching just above the hip, was then applied, and the patient allowed to walk about freely.

The new case was a little girl of five, in whom the disease had existed for two years and had now reached the third stage. She was in much better condition than either of the other patients, being, in fact, quite fat. The acetabulum was not perforated. After the operation she was placed in the same apparatus which had just been "shed" by No. 54, as both children were of about the same height. This case is also doing well.

Since Prof. Sayre's unjust removal from the position of attending surgeon to the Bellevue Hospital last summer, his clinics at the college have been constantly increasing in interest and importance, and his material is now so abundant that he can never succeed in bringing before the class half the patients that present themselves. A very good idea of the number and variety of cases he *does* present, however, may be obtained from the verbatim report of one of his ordinary clinics, published in the *Philadelphia Medical Times* of April 10. After the publication of his clinical lecture on hip-joint disease in the Putnam's series, a number of gentlemen expressed their surprise that he should be able to get together on the same day three cases illustrating the three stages of the disease; but this was entirely an accidental occurrence, and is by no means uncommon at his clinics.

Among the more interesting clinics in New York is

that of Prof. Abram Jacobi, at the College of Physicians and Surgeons, for diseases of children. It is kept up through the year, and is almost always pretty well attended. At his last lecture, Wednesday, he presented a number of attractive cases, among which were the following:

1. *Cephalæmatoma*.—A child of five years had a bad fall five days ago. Two days later, the mother noticed a lump on the head. We now find in the region of the right parietal bone a large, fluctuating swelling, surrounded on all sides by a hard ridge. An inexperienced person might suppose from this that the bone was depressed beneath the soft tumor. There has not at any time, however, been any vomiting or other brain-symptom. This is precisely like the *cephalæmatomata* of newborn infants. The blood collects under the periosteum, forcing it away from the bone, and this is just as likely to occur after the simplest labors as after the most difficult. It is a characteristic of this affection that, on account of the peculiar formation and attachments of the periosteum, it cannot extend from one bone to another. The hard ridge around the edges is really necessary to the diagnosis of *cephalæmatoma*, and is due to the formation of new bone just at the point where the periosteum separates. No treatment is to be employed, as the blood will eventually be absorbed; though the parietal bone will remain permanently thickened. The great point is to keep the patient's head free from injury, applications of all kinds, and especially the interference of doctors.

2. *Bromide of potassium followed by an eruption*.—The child is three years of age. When eight months old, he fell from a height of four feet, and two weeks afterwards had a severe epileptiform convulsion. This was repeated every day up to last July, when he had an attack of scarlatina; after which he had no more fits until January. From that time to the 31st of March they occurred two or three times a week. At the latter date he was brought to the clinic, and fifteen grains of bromide of potassium three times a day were ordered. After this he had no more convulsions, but three or four days after commencing the medicine, a rash (probably urticaria) broke out. The dose of the bromide was afterwards diminished to twelve grains. We now notice well-marked eczema developed, particularly on the legs; and this is, no doubt, principally due to the child's scratching. The drug has produced no other toxic symptoms, the general health being excellent, and we shall, therefore, go on using it, since it seems to control the convulsions so admirably, at the same time treating the eczema as an ordinary case of that disease.

In this case, rachitis, which predisposes the skin, as well as the glandular tissues, to inflammation, has, no doubt, been the ultimate cause of the severity of the skin-disease. The mother says the child cut its upper central incisors before the lower ones, a fact which Prof. Jacobi has long claimed denotes premature ossification of the skull. He says he cannot claim priority in this matter, however, since he has recently read, in Dr.

Livingstone's last work, that in the province of Lunda, in Central Africa, the natives always destroy infants whose upper teeth protrude first, as they have found that they are apt to grow up idiots or epileptics.

3. *Rheumatic endocarditis followed by chorea minor*.—This child, between four and five years old, had a severe attack of pneumonia early in the winter, recovering about the 1st of January. She was then well till March, when she had a well-marked attack of acute articular rheumatism. There was also *endocarditis*, and auscultation revealed mitral insufficiency after the attack had passed. *Chorea minor*, as is not at all uncommon in these cases, also soon developed. She was put upon the tincture of the chloride of iron and digitalis, but, the chorea not being thus controlled, Fowler's solution was given in addition. Chloral at night, when necessary, to secure sleep. Under this treatment she is now improving as rapidly as we could expect.

4. *Scleroderma*.—The patient is eight or nine years of age, and the disease is of over two years' standing. It involves the trunk and both the lower extremities. There is marked atrophy of the right, particularly, whose measurements are scarcely more than half those of the left. An entire absence of connective tissue is noticeable, and there is also some shortening of the limb. There has been no œdema, so far as can be ascertained. This is certainly a remarkable case, and is especially interesting from the rarity of the disease. Meigs and Pepper have seen only one case in a child, and that was an acute attack in an infant suffering from *atelectasis pulmonum*. The person who accompanied the child said that a younger brother was also now similarly affected.

An interesting joint meeting of the city Public Health Association and the Dwelling Reform Association was recently held at the School of Mines, Columbia College, to consider the subject of improving the homes of the poor; and we trust it may be productive of much good, for there is certainly the most urgent need of reform in this matter. Dr. Stephen Smith, whose long connection with the Board of Health has rendered him perfectly familiar with the subject, read an excellent paper, in which he reviewed the crowded condition of this city in certain quarters, and suggested remedies for the evil. In three wards alone, over half a million of people lived, crowded into twenty-three thousand houses, so badly drained and ventilated that health and virtue were almost impossible. In London, companies bought outside lands, planned villages, and built cottages, the rent of which was received as purchase-money. Mr. Disraeli, who lately visited one of the villages of "The Artisans', Laborers', and General Dwellings Company," said that he was pleased and surprised at its success, and that it was, in part, a solution of a great social problem.

In Philadelphia there are several hundred co-operative associations. At the distance of three-quarters of an hour's ride from the State-House, a mechanic could now purchase for \$200 a lot 18 feet front by 90 feet deep, and could erect a house worth \$1000, by

simply paying about \$150 per annum to one of these societies. When the whole was paid, the ownership was transferred to him. This is certainly a wonderful contrast to the state of affairs in New York, where the laboring-man has to pay an exorbitant rent for two or three miserable rooms in a wretched tenement-house.

Dr. Smith said that, if proper measures were taken, communities like those of London and Philadelphia could be established along the lines of the Hudson River, Harlem, and New Haven Railroads, in an incredibly short period. Yet, however well such a plan might succeed, there would always be a city population left, and the remaining problem was, how to deal with them. He would, therefore, make the following suggestions: 1. Utilize all available waste room. In the first and second wards, now nearly deserted, there are empty buildings enough to accommodate about fourteen thousand people. 2. Improve existing tenements. In this the tenants' aid should be sought, after the plan of Miss Octavia Hill, in London, who, with money furnished by Mr. Ruskin, bought old tenements, and became herself the landlady. 3. Erect new and improved tenement-houses. This might be made a municipal reform, as in Glasgow.

At length, we believe, the commencements are over for the season. The last was that of the College of Pharmacy, whose graduates numbered thirty-eight; and on this occasion the students presented to the college, through Prof. Bradford, a fine painting of Dr. Chandler, Professor of Chemistry in that institution and in the Columbia School of Mines, and one of the most popular scientific men known to New York for a number of years.

During the past month, Prof. Doremus, who seems to enjoy particularly any occasion which brings him conspicuously before the public, has been giving a short course of brilliant lectures on "The Agreement between the Mosaic and Scientific Accounts of the Creation." These lectures were first delivered some years since, and have now been repeated, of course with the additions rendered necessary by the advance of science, at the request of a number of distinguished gentlemen.

The paper by Dr. Lautenbach in the last number of the *Times* proves a very appropriate contribution to our knowledge of the physiological action of conium, in view of the interest excited in the subject by the recent poisoning case in Brooklyn. Dr. A. N. Bell, who was one of the Coroner's jury in that case, is to read a paper in reference to it at the Medico-Legal Society to-night.

PERTINAX.

CASE OF INVERSIO UTERI OF TWO YEARS' STANDING (*N. Y. Med. Journal*, April).—Dr. B. F. Dawson reports a case of this kind, resulting from improper traction on the cord and placenta after labor, and lasting undiagnosed for nearly two years. Repeated attempts at manual reduction under ether, with injections of warm water between times, finally resulted successfully, and the patient returned to her home in the country six days later.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting, held Wednesday, February 24, 1875, at 8 o'clock P.M.,

PRESIDENT, DR. WILLIAM GOODELL, in the chair,

Dr. W. R. D. BLACKWOOD made some remarks on a case of delivery by abdominal section after the death of the mother, which he said had been incorrectly reported to this Society, and which had appeared in the *Philadelphia Medical Times* of February 6, 1875. The doctor alluded to two cases which occurred in his practice during his residence in the Southern States, in one of which the child was successfully delivered by Cæsarean section five minutes after the mother's death. In the other the child was delivered twenty minutes after the death of its mother, but it could not be resuscitated. He also referred to a case in the practice of a friend, in which, fifteen minutes after the death of the mother, the child was delivered and was dead. From all that he had been able to read upon the subject, it appears that the child cannot survive the death of its mother for a longer time than from five to fifteen minutes.

Dr. O. H. ALLIS mentioned a case that was related to him by a competent witness, where a woman died of tetanus almost at full term, and the foetal heart was heard to beat for five minutes. There was no attempt made to deliver her.

Dr. W. B. ATKINSON said he was called to meet Dr. Patterson in consultation in a case where the patient had just died after an attack of convulsions of about fifteen hours' duration. Delivery had been attempted with the forceps, and was finally accomplished by turning. Resuscitation was attempted, without success. He believed that he had observed rapid dilatation of the os to occur in cases of convulsions.

Dr. W. GOODELL said that in such cases he thought the best treatment would be to deliver per vaginam. Dilate and deliver by forceps or by turning; if the os were not readily dilatable, he would incise it.

Dr. ATKINSON mentioned a case in practice, where the patient from the sixth month had been afflicted with chorea. He was not informed of this condition until labor had commenced. The convulsive tendency was so strong that the patient was with difficulty kept on the bed. As he had before remarked in such cases, the dilatation was rapid, and the delivery was speedily accomplished. All the symptoms immediately disappeared, and her recovery was unattended with any untoward symptoms.

Dr. JAMES H. HUTCHINSON then read a paper on "The Use of the Ophthalmoscope in the Diagnosis of Cerebral Disease."

Dr. L. TURNBULL, being called upon, said that he was not prepared to enter upon an elaborate discussion of the subject, but would state that he was interested in the paper, and pleased with the clinical facts therein contained, as confirming the importance of the ophthalmoscope as an aid to diagnosis in general practice. It was in the year 1851 that Prof. Helmholtz published his "Description of an Eye-Mirror for Examining the Retina of the Living Eye," and in May, 1853, Dr. Turnbull first employed this valuable instrument. "I published," said Dr. T., "a series of communications in reference to its clinical use in diseases of the eye in the summer of 1859.* Neither Helmholtz nor any one at that time had any idea that it would be an aid to the general physician in the diagnosis of some of the most obscure affections of the brain, kidneys, etc. I advocated at that

* Medical and Surgical Reporter, Philadelphia, June 25, 1859.

time its general use, in the following language: 'Its employment requires about as much ingenuity and the same amount of time and attention as is necessary to become expert with the stethoscope' (Op. cit., p. 262). Its adoption, even by the ophthalmologists of that day, was opposed, as I stated in the same article, as follows: 'As is usually the case with every innovation upon old ideas, there is found a certain amount of opposition to its employment (even at the present day), and, as would naturally be anticipated, it comes from the same class of men who so strenuously opposed the introduction of auscultation, vaccination, anæsthesia, and other equally valuable adjuncts to our profession, and who are equally well represented outside of our profession by the opponents to the introduction of gas for illumination, the electric telegraph, steam in heating, etc., etc. Being unwilling to learn the use of the ophthalmoscope by the sacrifice of time and labor, they endeavor to produce its condemnation by a variety of objections.' In a reprint of these clinical observations* (1865), three years after my first use of the instrument, I brought to the attention of physicians its great value in Bright's disease of the kidneys, giving the ophthalmoscopic appearances; and here I would advise caution in the beginner with the instrument in this disease, else he will be apt to meet with disappointment, for all the illustrations of this disease are given in its advanced stage. At the outset, the appearances do not afford any special characteristics. At page 14 I bring forward the proofs from Bouchut† and Robin that 'the ophthalmoscope had been found useful in the diagnosis of granular meningitis' (*Gazette des Hôp.*, 1862). Twenty-three cases of meningitis had been examined by Bouchut, and the changes in the eye-ground were given and confirmed by Robin. And here I would utter another caution: that in all important cases it is well to have the ophthalmoscopic appearances confirmed by an expert with the instrument, as it requires constant, almost daily, use to keep the eye of the observer in training. So that no mistake should happen, abundance of time must be given to each case. I have seen a patient in whom much distress of mind was induced by a general surgeon mistaking a natural excess of pigment for a severe disease of the retina. In the examination of the retina of the negro, do not confound its bluish-gray normal color with a diseased condition." In concluding his remarks, the speaker desired to impress upon the hard-working physician not to neglect the use of the microscope and ophthalmoscope in deep-seated diseases of the eye, brain, and kidneys; in neglecting any of these aids to form a correct diagnosis he is culpable, and is not doing justice to the valuable lives placed in his hands. Cases of such neglect Dr. T. has met with even under the care of intelligent and capable physicians and surgeons. Those desiring to study the use of the ophthalmoscope in diseases of the nervous system he would refer with much satisfaction to the work of Allbutt,‡ which contains almost everything on this subject up to its date of publication (1871) worth knowing. The author has arranged his subjects well, describing first the anatomy of the optic nerve and retina so far as it is needful, then tracing the mode and time of variation from the healthy standard. Having done that, he describes the various diseases in turn in which optic changes are associated, as, for instance, encephalic, spinal, renal, and the mode of investigating the states of the optic nerve and retina.

* Defective and Impaired Vision, with the Clinical Use of the Ophthalmoscope in the Diagnosis and Treatment of Diseases of the Eye. 8vo, pp. 36. Philadelphia, Lindsay & Blakiston, 1865.

† See paper on "Medical Ophthalmoscopy" by M. Bouchut (*Medical Times and Gazette*, January 23, 1875), confirming his early observations; and he is about to publish a large atlas of medical ophthalmoscopy.

‡ On the Use of the Ophthalmoscope in Diseases of the Nervous System and of the Kidneys; also in certain other General Disorders. By Thomas C. Allbutt, M.A., M.D. Cantab. Pp. 405. London and New York, Macmillan & Co., 1871.

Dr. STETLER asked Dr. Turnbull whether the ophthalmoscope is of any use in deafness.

Dr. TURNBULL, in reply, said that as yet the ophthalmoscope has not been of much use in the diagnosis or treatment of deafness; the early cases in which it has been employed were of deaf-mutism, in which there was found retinitis pigmentosa. In cases of deafness and blindness after cerebro-spinal meningitis there is suppurative choroiditis, which may be diagnosed by the yellow or yellowish-white reflex we obtain from the pupil by means of the eye-mirror. This same condition of the eye is also found in cases of what is termed brain or cerebral deafness, following puerperal fever, meningitis, pyæmia, typhus and typhoid fever. Mr. James Hinton (*The Questions of Aural Surgery*, p. 284) states that Dr. Bader examined by the ophthalmoscope for several months together every patient with deafness who came to him with symptoms which he considered of a nervous character. With few exceptions he found hypermetropia present; and he considered it to be due not to flatness of the eyeball, but to "a certain form of paralysis of the third nerve;" no other affection of the eye was found to prevail. The subject is worthy of further study and investigation.

Dr. STETLER referred to a case of stercoraceous vomiting reported by Dr. Taylor at a previous meeting, and expressed a doubt whether fecal vomiting is possible as long as the ileo-cæcal valve is intact, this being a perfect valve and preventing regurgitation. Dr. S. was taught, and still believed, that the characteristic odor of the fæces is acquired in the colon, or that the function of the colon is fecification. It is doubtful whether, in the so-called cases of stercoraceous vomiting, the matter is genuine fæces. Nature would revolt at such a spectacle.

Dr. J. TYSON said that if the term fæces be confined to the contents of the rectum, then much which is now spoken of as fecal matter must be excluded from that substance. But this he deemed erroneous; for the contents of the lower end of the small intestine are as much fecal matter as those of the large bowel, differing chiefly in consistence. The effete matters, including the odorous substances which are contributed to the residue of the food, are added in the small intestine as well as the large. Formerly it was thought that it was the special office of the solitary and agminated (Peyerian) glands to contribute these matters, but the more modern and, in his conception, the correct view assigned to these follicles the rôle of lymphatic glands,—that of blood-corpuscle factories,—so that the excretory function must be confined to the follicles of Lieberkühn. Moreover, he thought it not impossible for this valve to yield to pressure from below under abnormal conditions.

Dr. W. R. D. BLACKWOOD was satisfied that fluids would regurgitate or be forced through the ileo-cæcal valve. In a recent case of intussusception of the ileum in his practice, large quantities of fecal matter were vomited, differing in no manner from ordinary fecal dejections from the rectum, except in consistence. The intussusception was overcome by forcing a large quantity of warm salt water into the rectum, and the final injection must have passed the valve, because salt was evident to the taste in subsequent vomiting, which occurred in a few minutes after giving the injection.

His friend Dr. W. C. Phelps, who assisted him, was satisfied both that fecal vomiting took place and that the salt water passed the valve. He has seen water pass from the rectum into the ileum in the dead body, and there was no evidence of disease in the intestine at any point.

Dr. H. ALLEN said that the valve aids in preventing regurgitation, and yet he could conceive of conditions in which regurgitation might occur.

Dr. O. H. ALLIS said that he had witnessed many

cases of obstinate vomiting, but in no case was there any suspicious odor present. In a case of concealed strangulated hernia, that proved fatal on the sixth day, and in which vomiting was persistent, there was no odor of fecal matter.

REVIEWS AND BOOK NOTICES.

SERIES OF AMERICAN CLINICAL LECTURES. No. II. ACUTE RHEUMATISM IN INFANCY AND CHILDHOOD. By A. JACOBI, M.D. New York, G. P. Putnam's Sons. Pp. 62; price 40 cents.

The occurrence of rheumatism among children has been regarded by many as unfrequent; Dr. Jacobi, however, believes the affection to be quite common, but often overlooked. After a full discussion of the diagnosis and pathology of the disease, he devotes several pages to the various modes of treatment adapted to the various symptoms. Rest for the joints in a semi-flexed position, the application of ice in the acute stage, and hot poultices when the temperature has been reduced, in order to hasten absorption of the effusion, are some of the remedies to be first applied. Later, when it may be supposed that no further absorption of effusion will take place, gentle compression by collodion, flannel bandages, cotton with linen bandages, elastic bandages, plaster of Paris, will be found serviceable. Puncture of the joint and the use of the aspirator cannot be objected to when the contents are purulent, and may sometimes be used in copious serous effusion. The mild galvanic current also hastens absorption. The usual anodynes are to be used locally for the relief of pain. Internally, to relieve vascular pressure, aconite, digitalis, veratrum, colchicum, or quinia is administered. The latter Dr. Jacobi thinks of great value. The bisulphate or muriate may be given in a dose of five grains once, twice, or three times daily to a child of one or two years. Where the stomach rebels against the remedy, the rectum may take its place. The lecture concludes with a few remarks on the choreic manifestations of rheumatism, in which ergot in large doses is recommended.

GLEANINGS FROM OUR EXCHANGES.

EXTRACTION OF A CALCULUS FROM THE BLADDER THROUGH A VESICO-VAGINAL FISTULA.—A woman aged 66 was admitted to the West London Hospital, August 25, 1875, under care of Mr. Teevan, suffering from a vesical calculus.

On examination, a fistula admitting the tip of the finger could be felt in the roof of the vagina, and a stone apparently of small size was struck by the sound, lying close to the fistulous aperture.

On September 1, at 3 o'clock P.M., the patient having been put under the influence of ether, Mr. Teevan introduced a pair of narrow-bladed forceps into the bladder through the vesico-vaginal fistula, and, having grasped the stone, which was lying above the hole, extracted it by gentle traction. The calculus was phosphatic, ovoid in shape, and measured one and three-eighths inches long, and two and three-fourths inches in circumference. The knife was not used, but a few drops of blood escaped from the distended edges of the fistulous opening. The bladder was then examined with the finger, and found to contain a large quantity of mortar-like debris, which was removed with a small scoop. The viscus was then washed out, but no attempt was made to close the fistula, as the parts were in too unhealthy and inflamed a condition to admit of any

operation for that purpose. The patient's sufferings ceased after the removal of the stone, but she still complained of a "soreness," owing to the urine dribbling away; and, at her own request, she left the hospital on September 22.

Soon after her return home, she again began to pass pieces of "grit," accompanied with much pain. Not long afterwards the patient's feet and legs became dropsical, and she died on December 6, rather more than three months after the extraction of the stone.

Mr. Teevan ascribed the existence of the fistula to either the ulceration accompanying chronic cystitis, or to the result of the employment of a metal catheter, which had been used for some time by an unprofessional person.

CASE OF SPINAL PARALYSIS IN AN ADULT RESEMBLING THE SO-CALLED INFANTILE PARALYSIS.—Dr. D. F. Lincoln reports the following case in the *Boston Medical and Surgical Journal* for March 25: A tall, stout man, 49 years of age and of previous good health, noticed one morning, without any previous symptoms, a feeling in his legs as if they had fallen asleep. The feeling came on again and again through the day, and he began to be a little weak in the legs. In the afternoon, when trying to step upon the platform of a street-car, he failed, and had to be helped in. On arriving home, he was able (with assistance) to walk up-stairs to his bedroom, and went to bed, where he remained.

When seen by Dr. L., two days later, he felt well, no giddiness, muscles of face and eyeballs under perfect control, pupils normal in size and contracted well, speech natural, vision and hearing without defect. The bladder and rectum performed their functions normally. The senses of touch, pain, and temperature were normal in the hands, and nearly so in the feet. Reflex contractions could scarcely be obtained from the soles. There were no abnormal sensations. Pulse 80, temperature 98°. No albumen in the urine.

The muscles of the neck and limbs, except below the knees, were generally in a condition of semi-paralysis. He lay on his back, almost helpless; could not raise his head from the pillow without some help, and could not raise his knees from the bed by flexing the thighs. The grasp of his hand was very feeble indeed. There was no paralysis of any muscle. Below the knees he seemed to have more strength. The weakness was much more marked on the left than on the right.

Treatment consisted at first in nux vomica and cinchona, and subsequently tincture of iron with strychnia, and Horsford's acid phosphates of lime and magnesia. On the fifth day of the attack, treatment by the induced electric current was begun, when it was found that some, at least, of the muscles had lost part of their susceptibility to this stimulus. The loss went on increasing until the twenty-first day, when the galvanic current was substituted, a descending current being applied to the spine, and interrupted currents to the muscles, three times a week; the faradic current was also continued for a few weeks.

The hot-air bath to profuse perspiration was used just before the application of the currents, together with regulated gymnastic exercises. The paralysis of the muscles was gradually relieved under this treatment to a very considerable degree. The patient's improvement was very gradual, and it was six months before he was able to ride out. He finally was enabled to attend to his business pretty much as before the attack.

RARE CASE OF UNCONTROLLABLE VOMITING (*Boston Medical and Surgical Journal* for April 8; from *L'Union Médicale*, January 19).—A woman 50 years of age, suffering from caseous pneumonia of the right lung with cavities, presented the symptom of uncontrollable vomiting, which had persisted for five months. A sensation

of excessive pain and oppression was always present in the epigastrium as soon as she had eaten, while it was absent when she fasted. Upon the ingestion of food, especially that which was solid, the pains were such that the patient would roll in her bed and cry out until she was relieved by vomiting. This occurred every time that food was taken, and alimentation was limited to a few grammes of milk daily.

The autopsy showed the stomach to occupy nearly the whole of the sub-umbilical region. The organ was clearly divided into two parts, being twisted upon its centre. The upper part was very much distended, the lower part quite empty. The twist being unwound, the organ appeared like an hour-glass-shaped stomach with a central contraction. Removed and inflated, the stomach presented its natural form and showed no traces of the contraction. There was only a slight catarrh of the mucous membrane at the contracted point; all the rest of the organ was normal. The intestines, compressed to a very small volume, were scarcely visible.

CASE OF ACUTE OTITIS MEDIA; SUPPURATIVE INFLAMMATION OF THE MASTOID REGION; DEATH.—Dr. F. M. Pierce reports the following case in the *British Medical Journal* for March 6:

A youth of 16, who had never had any fall or blow upon the head, had noticed about four weeks previously slight deafness and pain in the right ear. About a fortnight later, the mastoid process became swollen and tender. A week previous to his examination, after severe pain in the ear and about the temple, a purulent discharge came from the right auditory meatus.

At the time when he was first seen he complained of severe pain in the depth of the ear, about the mastoid and down the neck. There was a profuse purulent discharge from the right ear; the mastoid region was greatly swollen, red, and soft, causing great projection of the auricle. No paralysis, nor any affection of the cranial nerves. A lotion of sulphate of zinc and carbolic acid was used, and an incision made into the mastoid swelling without liberating any pus. No vomiting, delirium, nor hemorrhage from the external meatus.

On the subsequent days severe pain in the back of the head, which had been relieved by the incision, returned, depriving the patient of sleep. There was no vomiting, delirium, nor hemorrhage from the meatus. In the course of the next few days the discharge from the mastoid region became profuse and offensive; that from the meatus diminished. The patient was restless, frequently tumbled down, and kept his head clasped between his hands, which he said relieved the pain at the back of his neck and head. Convulsive movements of the left arm and leg were now very noticeable. A day or two later all the symptoms had become more marked, when, quite suddenly, the left side of head and ear changed to a dark-purple hue, his head dropped forward, and he died. Unfortunately, no post-mortem examination could be obtained.

SOME PRACTICAL HINTS CONCERNING THE CARE OF NEW-BORN CHILDREN.—Dr. Buckingham (*Boston Medical and Surgical Journal*, March 25) says that under ordinary circumstances the first thing to be done for a child is to clean it. Get rid of the salve-like vernix caseosa by rubbing the body with oil and then washing with soap and water. He has sometimes used the oil alone, working it well in at all points, and then rubbing dry with a towel. Oil is as clean as soap. The object of washing is to get rid of dirt, and whatever will remove the particular kind of dirt in question, whether soap or oil, is the best thing for its removal. Alcohol is objectionable, as it dissolves the oily matter from the skin, and has a tendency to chill the child. Once being made clean, it is not necessary that the child should have an entire bath daily. The nates and neighboring

parts should be kept clean, even if they have to be washed with every change of napkin. A very important point is the necessity for drying the skin thoroughly before dressing. A good rubbing with the hand after the rubbing with the towel is agreeable to the child. Flesh-powder or powdered starch is not so good, and, besides, these applications frequently become acid and irritating.

The still adhering umbilical cord should be cut short, and covered sufficiently to protect the clothing. If it is not tied until the pulsations in it have ceased, there will be no risk of hemorrhage from its cut extremity. Dr. B. would never cut the cord till all pulsation in it was stopped. The cord should be short, the ligature small, the covering ample; and if the latter become offensive in a day or two it should be removed. The belly-band should not be too tight. Strings on it are better than pins, if either be used; but the best band requires neither, being broad, thick, loose, and elastic, woven or knit of good woollen yarn.

THE NASAL DOUCHE.—In a paper read before the New York Medical Library and Journal Association, Dr. Beverly Robinson alludes to the wide-spread idea which is supported by some of the best authorities as to the frequent danger of using this appliance. Physicians are loath to abandon it, however, Dr. R. thinks, "as it is thought to be so thorough in its work of cleansing the nostrils and pharynx."

The latter generally received opinion is, however, an error in Dr. Robinson's opinion, and he endeavors to demonstrate the truth of his assertion by an examination of the relations between the stream thrown by the douche and the anatomical structure of the nasal passages.

He shows that the stream must issue from the nasal orifice of exit before it has flooded the upper part of the nose, and when from some obstacle the flow is interrupted this flooding could only take place for a few moments, when the pressure in the naso-pharyngeal space would be such that the soft palate would give way almost immediately.

The effect of this would be that some of the liquid would pass into the stomach, or in the confusion of breathing get into the larynx. He does not believe that either the vault of the pharynx, the superior and middle turbinated bones, or the superior meatus are cleansed at all by the nasal douche.

TWO CASES OF TRANSFUSION.—Dr. D. Clarke reports the following cases in the *Canada Lancet* for April 1.

The first was that of a woman 33 years of age, the subject of advanced phthisis. The operation was commenced by the direct method with Aveling's apparatus, but, as this was found not to answer, defibrinated blood to the extent of six ounces, containing a small quantity of spirits of ammonia, was injected.

Although some alarming symptoms followed the operation, yet the patient survived, and two months later was still living, auscultation and percussion showing no change in the parts affected.

The second case was also a woman of middle age, who had been the subject of phthisis pulmonalis for about a year. Six ounces of blood were injected by the direct method by the aid of Aveling's improved two-bulb apparatus, a solution of salt being used in the vessel instead of ammonia. The patient survived the operation, but sufficient time had not elapsed at the date of reporting to enable any estimate to be made of the permanent result likely to be gained.

EXTRACTION OF FOREIGN BODIES FROM THE EYE.—A correspondent of the *Lancet* writes as follows:

"SIR,—In consequence of the difficulty I experienced in removing from a patient a portion of steel deeply imbedded in the cornea, which did not yield to spud or

needle, some other means for its removal became necessary. Dry, white soft silk waste suggested itself to me, and was wound round a thin piece of wood, so as completely to envelop its end. This soft application was then brushed once backwards and forwards horizontally over the part of the cornea where the foreign body remained fixed. To my astonishment, it was at once entangled by the delicate but strong meshes of the silk, and was withdrawn with the greatest ease, caught by the same. Seeing no books (which I have consulted) mention this application, and feeling sure it is one of great value in removing foreign bodies fixed or floating in the conjunctiva or cornea, it seems to me a simple but valuable invention."

POISONING BY CHLORAL HYDRATE: RECOVERY.—Dr. Snell (*British Medical Journal*, March 27) was called to see a druggist's assistant who had swallowed a solution containing probably not far from an ounce of chloral. The patient was found breathing heavily, at times stertorously; face dusky, pupils contracted; pulse weak and about 76. He could not be roused, and made no attempt to answer the questions put to him. It was ascertained that he had not swallowed the chloral more than twenty minutes previously. An emetic was immediately administered, and the patient vomited freely. Gradually the breathing improved, consciousness returned, and after a few hours' rest he appeared perfectly well.

MISCELLANY.

WHITE COAL.—A new kind of fuel has been discovered on the Australian continent, which has received the name of white coal. It consists of felted vegetable fibres, like peat, which contain, interspersed between them, fine grains of sand. It is easily combustible, and burns with a light flame. The white coal covers large tracts, requiring no mining, and is already used in large quantities as fuel.—*Scientific American*.

CHARACTERISTICALLY SPANISH.—In a lecture on the relative procreateness of the sexes, Dr. Schlemmer (*Allg. Wiener Med. Zeitung*) mentions the fact that Isabella of Aragon, about the latter part of the fifteenth century, issued a decree fixing (not limiting) the number of conjugal embraces per day at six.

NOTES AND QUERIES.

PHILADELPHIA, April 30, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—At the request of Dr. W. S. Forbes, I send you the subjoined letter for publication, in order to correct the misstatement alluded to.

Very truly yours,
W. W. KEEN, M.D.

PHILADELPHIA, April 12, 1875.

DOCTOR W. W. KEEN.

MY DEAR DOCTOR,—I have just read with pleasure your published lecture, "A History of the Philadelphia School of Anatomy and its Relations to Medical Teaching." It is written with vivacity, and no doubt will be read hereafter with interest. There is a statement in it, however, concerning myself, made inadvertently, no doubt, which has no foundation in fact, and which I take leave to correct. You say that "in 1856, while Doctor Agnew was teaching, Doctor Forbes opened his school, which was designed largely to give facilities for dissection to the students of the dental colleges, in one of which he was Professor of Anatomy." Now the fact is this. In 1858-59 I had in my anatomical class one hundred and ninety-

two students of medicine, and in the spring of 1863, just five years afterwards, I was elected Professor of Anatomy in the Pennsylvania College of Dental Surgery, the only college of dental surgery then open in Philadelphia. The matriculants of this College in 1863 were only forty-four in number. In addition to lecturing in my own Anatomical School, I lectured in the Pennsylvania College.

In regard to my teaching, it may be added that, in the twelve years during which my school was open, I taught eighteen hundred and sixty-seven students anatomy and operative surgery.

In March, 1867, just after the winter lectures, the Legislature of the State, after much exertion on the part of the committee appointed by the College of Physicians, of which I was chairman, passed my "Anatomical Act," a very notable event in the history of medicine in this country. This "Act" forbids, under penalty, the sale of dead human bodies for any purpose whatsoever. It legalizes dissection, and makes it free.

Yours very truly,
WM. S. FORBES, M.D.

No. 1405 LOCUST STREET.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a meeting held April 28, 1875, the following resolutions, presented by Dr. G. Hamilton, were adopted:

Resolved, That the members of the Philadelphia County Medical Society have learned with regret the death, March 31, 1875, of Dr. D. Francis Condie, one of the founders, and at one time president, of this Society.

Resolved, That in the decease of Dr. Condie the Society recognizes the loss of a former member who was long distinguished among his fellows by the constancy and zeal manifested at all times and upon all occasions in the support of whatever tended to fulfil the objects for which the Society was instituted, and in the exaltation and maintenance of its character and reputation.

Resolved, That by the death of Dr. Condie the profession has lost an indefatigable student, and an author whose stores of practical knowledge, strong common sense, and large experience had enabled him to contribute much valuable matter for the guidance of the practitioner.

Resolved, That in integrity and general moral worth the life of Dr. Condie merits our fullest approbation, and that in his spirit of benevolence, prompting him in early life to aid as a pioneer in the foundation of the first temperance society of Pennsylvania, the community has cause to hold his memory in grateful remembrance.

Resolved, That, while deploring the loss of our late member, we have nevertheless reason for thankfulness in the length of days granted to him, and that, in the wisdom of a Providence that cannot err, soundness and strength of intellect were vouchsafed unto him until near the close of his existence.

NORTHERN MEDICAL ASSOCIATION OF PHILADELPHIA.

A STATED meeting of the Northern Medical Association of Philadelphia will be held at their hall, 608 Fairmount Avenue, on Friday evening, May 14, at 8 o'clock.

Subject for discussion: Diphtheria. To be introduced by Dr. S. H. Griffith.

The medical profession are cordially invited.

ERRATUM.

THE author of the article on typhoid fever in our issue of April 24 was Dr. George, not J. G., Hamilton.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 27, 1875, TO MAY 3, 1875, INCLUSIVE.

HEAD, J. F., SURGEON.—Announced as Medical Director of the Department. G. O. 3, Department of the South, April 30, 1875.

BACHE, D., SURGEON.—Relieved from temporary duty at Baltimore, and to resume his duties at Fort McHenry, Md. S. O. 76, A. G. O., April 28, 1875.

WEEDS, JAMES F., SURGEON.—Transferred from Department of Dakota to Department of the South. S. O. 75, A. G. O., April 27, 1875.

WOLVERTON, W. D., ASSISTANT-SURGEON.—Transferred from Department of the South to Department of Dakota. S. O. 75, c. s., A. G. O.

SEMIC, B. G., ASSISTANT-SURGEON.—Assigned to duty at Fort Yuma, California. S. O. 25, Department of Arizona, April 12, 1875.

SATURDAY, MAY 15, 1875.

ORIGINAL LECTURES.

CLINICAL LECTURE ON VENEREAL DISEASES.

BY F. R. STURGIS, M.D.,

Lecturer on Venereal Diseases in the Medical Department of the University of New York, Blackwell's, etc., etc.

Delivered at the Charity Hospital, Blackwell's Island, New York, April 12, 1875.

NO. I.

GENTLEMEN,—I have two interesting cases to show you to-day. The first is a case of the primary lesion of syphilis in a woman, extremely well marked. The history of the case is briefly this. She cannot give the exact date of the appearance of the lesion, but she says it has lasted for seven weeks. The ulceration is extremely superficial, looking as though the epithelium merely was stripped off. It differs entirely in appearance from what we find in the *chancroid*. The edges are flush, and level with the surrounding surfaces; in the chancroid they are usually undermined. With the chancroid there is a large amount of secretion; with this, you see, it is slight.

There has been but little treatment in the case, the patient having been in the hospital about two weeks. You will notice that the so-called induration which surrounds the sore is extremely well marked. This induration is not a necessary accompaniment of the primary lesion, although when present it is of value. There are three different varieties which we recognize: 1, the Hunterian indurated chancre; 2, the parchment indurated chancre; and, 3, the erosiform indurated chancre. This latter variety has hardly any induration at all.

Another characteristic of this sore is its superficial character. There is no ulceration, in the true sense of the word. With the chancroid, you know that there is an actual loss of tissue; here there is little, if any. The period at which these ulcerations should make their appearance is from three to four weeks after the infecting coitus. In the large majority of cases it will be impossible to arrive at an exact date, especially in women: usually, it commences from the twenty-fourth to the twenty-sixth day after connection; sometimes later; occasionally, but very rarely, earlier. Those rare cases you will occasionally see, and it then sometimes becomes a nice point in the diagnosis to determine whether a given sore is chancroidal or syphilitic.

These primary lesions progress very slowly. In this case, our patient noticed a little papule which extended slowly, but, as it was during her menstrual period, nothing could be done for it. The ulceration has been larger than it is now. The primary lesion of syphilis has a tendency to get well if allowed to, oftentimes healing up in a few days; whereas the chancroid is inclined to spread.

With regard to the treatment of the primary lesion, the simpler it is, the better: merely local

dressing, separation of contiguous surfaces, and perhaps dusting over with a powder, will suffice; only in rare cases will cauterization be requisite. You are much more likely to irritate and keep up your sore from the use of the cautery, than if you let it alone. With regard to commencing treatment at once, there are various opinions,—some in favor, some against. I think it better to wait, for two reasons. In the first place, you are often unable to decide upon the character of the ulcer; and, knowing that mercury is absolutely injurious to chancroid, it is well to abstain until this point is settled by the appearance of the secondary symptoms. In the second place, giving the mercury *ab initio* will not prevent the appearance of subsequent lesions, but it does have the disadvantage of retarding them, sometimes for several weeks. You are then entirely abroad as to the nature of your disease, and in doubt whether to continue treatment or not. Another point: you do no harm to your patient by waiting, as the virus does not accumulate by delay, and therefore I say to you that the most simple treatment will very often be the best.

These lesions of syphilis are usually single, seldom multiple; while with the chancroid the opposite obtains. These lesions, moreover, are not auto-inoculable, the disease, as a rule, giving immunity from a second attack to the person the possessor of it. In making the attempt at auto-inoculation, you may get a small pustule, but this disappears in forty-eight hours. You do not get a new primary lesion; whereas in the chancroid you can perform auto-inoculation from the time of its appearance until the time of its cicatrization.

The next case I have to show you is one of chancroidal phagedæna, where the ulceration has run almost around the entire glans penis.

One word with regard to this phagedæna. It is not a constituent of either the chancroid or the primary lesion, but is a complication, and a serious one, denoting, as it does, a vitiated condition of the general health, either from some inherited taint, alcoholism, or other debilitating cause. You will sometimes find that as fast as it heals at one edge it extends in another; you then have what is known as a serpiginous chancroid.

This patient had gonorrhœa one year ago, and subsequently had a sore on his penis, which disappeared after treatment in a short time. The present sore appeared ten days after connection, and spread rapidly. Here you notice the short time which has elapsed between the appearance of the sore and the time of connection, differing in that respect from what takes place in the indurated chancre. In the next place, you see that there is quite an extensive ulceration along the base of the glans penis and beneath the sheath of the organ. The amount of secretion is also very abundant, and the edges of the sore, as you see, are ragged and undermined; indeed, at one point the ulcer has burrowed for quite a distance. In other words, a decidedly destructive process has been going on. Besides this, the entire organ is doughy and œdematous. On handling the base of the ulcer we are struck at once

by the fact that it is perfectly soft, and devoid of the hard cartilaginous ring of induration which surrounds the primary lesion; and on inspecting the groin we find no indurated or swollen glands. These are points of much diagnostic importance, for the presence or absence of induration in the inguinal glands, as well as in the ulcer, marks the difference between the chancroid and the chancre, the simple non-constitutional venereal ulcer and the specific constitutional one.

This phagedæna is a complication of much consequence. It may attack both the primary lesion (chancre) and the chancroid, but is not a component of either, nor does it belong to one more than to the other. If it attack the syphilitic ulcer, it will carry off the induration; but still this does not change the character of the sore; subsequent symptoms will make their appearance, and usually in such cases they are likely to take on ulcerative action. In this case, the progress has been rapid; the ulcer has extended in less than a week, and burrowed beneath the skin of the penis and down the glans penis itself. The ulceration has that peculiar appearance which is found in these chancroids. It has an abundant secretion and undermined edges; and these edges are important in the treatment by cautery, for you must remember to cauterize not only the surface of the sore itself, but beneath the edges; otherwise, you may have to cauterize two or three times over, if you neglect this slight precaution. What is true in the treatment of the ordinary chancroid is doubly true here: destroy the ulcer thoroughly and quickly. But how are we going to get at it in order to cauterize it? Sometimes we are able to retract the prepuce; but in this case it is impossible to get it back, and then the next best thing to do is to inject a medicated solution beneath the prepuce, in order to cleanse and alter the character of the sore. Should this be impracticable, we might dilate the prepuce with pieces of sponge packed between it and the glans, just as we would an os uteri; and, if all these methods fail, then we may lay the ulcer open by a free incision. It is important to expose the sore thoroughly in order to cauterize it properly; and it is better to cauterize into sound tissue than to do it imperfectly. If you are compelled to resort to an incision, do not forget to cauterize the cut edges of the wound as well, otherwise they will become inoculated.

Before leaving the subject of chancroid, gentlemen, let us devote a few minutes to a consideration of their seat. It was for a long time believed that the head and face possessed an immunity against chancroid, and that any venereal ulcer seated upon these parts must be syphilitic. It is true that in a large proportion of cases such is the fact; but later research has shown that the chancroid may, and does, appear upon the lips, face, and other parts of the body.

There is an interesting case of this kind in the wards, where the ulcer, primarily seated upon the genitals, was inoculated upon the face, behind the ears, upon the body, hands, and wrists, by the patient himself, notwithstanding that he had been warned of the danger of auto-inoculation.

The primary lesion, unless complicated, as a rule, gets well rapidly. The chancroid, on the other hand, has a tendency to extend almost indefinitely, especially if it become phagedænic. In these ulcerations we have a period of incubation of only a few days at the most. In the primary lesion we have a period of incubation of several weeks. It may not always be easy to get exact dates, from the patient's uncertainty about it, but in the majority of cases you will find that the period of incubation in the syphilitic ulcer is from three to four weeks. The glandular induration, with the primary lesion, is rarely absent. Sometimes it is slight, sometimes well marked; whereas in the chancroid, generally, you have no complication of the inguinal glands whatever. When there is, the resulting bubo nearly always assumes the character of the sore itself,—*i.e.*, is chancroid; oftentimes undermining the tissues to an alarming extent.

Another point is the multiplicity of these lesions. Chancroids are often multiple; the primary lesion very rarely. The former is auto-inoculable, the other is not. Even if at the time of infection the chancroid be single, it nearly always becomes by-and-by a multiple sore,—that is to say, any abrasion of the skin is likely to become chancroid; whereas, with the primary lesion, the infection once given, the system is no longer susceptible to a fresh inoculation. German investigators have made the attempt to inoculate the bearer of the primary lesion with the secretion of the sore, with but little effect. All that has been done is this: the skin of such patients is usually irritable, and the secretion may produce a small pustule; but this pustule comes on very soon after the inoculation has been made, and disappears in a short time; showing, by the absence of all the diagnostic signs of the chancre, that it is a false lesion, so to speak. In the primary lesion the ulceration is superficial; it rarely goes deep unless it be complicated with something in the shape of phagedæna or gangrene. The presence of the induration is a valuable sign, but that may sometimes be absent; so that you have only the history of the case to guide you in forming your diagnosis. After it has lasted for some while, the chancre will sometimes assume a peculiar appearance; the floor of the ulcer becomes covered with an abundant crop of granulations, which spring up above the level of the surrounding tissues. Over these granulations will be spread, oftentimes, a thin film, looking not unlike mother-of-pearl, particularly when seated upon moist surfaces. If the primary lesion be seated upon parts exposed to the air, then you will sometimes find it covered over with a light crust. In other words, the chancre becomes converted into a mucous patch.

As a rule, an indurated chancre, after it has healed up, remains healed; but there are exceptions to this rule. It sometimes happens, especially if the induration has been extremely well marked and the cicatrization has been slow, that the chancre breaks out again without a fresh connection having been indulged in. Remember this, as otherwise you may think your patient is trying to deceive you.

ORIGINAL COMMUNICATIONS.

CLINICAL CONTRIBUTION TO THE SYMPTOMATOLOGY AND PATHOLOGY OF INTRACRANIAL TUMORS.

BY CHARLES S. BULL, M.D.,

Ophthalmic Surgeon to Charity Hospital; Assistant-Surgeon to the New York Eye Infirmary; Microscopist to the Manhattan Eye and Ear Hospital.

IN the *Times* for January 9, 1875, the writer reported a case of intracranial tumor with microscopic examination, which was somewhat rare as regards locality and symptomatology. The following cases are presented in detail for the sake of comparison with each other, and as a contribution to the symptomatology, prognosis, and pathology of the subject. It may now be said, with a certain amount of justice, that the physician should never be surprised at any variety of symptoms occurring in the course of a supposed case of intracranial growth. But there are a certain train of symptoms which we always expect to encounter in these cases. The histories of the following cases will show that the expected symptoms are sometimes wanting, and their place taken by others which obscure both diagnosis and prognosis, and leave us very much in the dark:

Case I.—A. C., æt. 50, Ireland, blacksmith. The patient has been an inmate of Charity Hospital several times during the past two years, suffering from asthma, chronic bronchitis, and emphysema. He was admitted for the last time on December 4, 1874, for a troublesome cough, with considerable expectoration and great dyspnoea. On physical examination, there were found the usual signs of chronic bronchitis and emphysema, and, in addition, hypertrophy of the heart. The man's face was constantly congested, and the extremities were cold, and almost livid. When he walked, his gait was tottering or waddling, resembling somewhat that seen in patients suffering from pseudo-hypertrophic muscular paralysis. There was no paralysis, however, of any muscle, and the cutaneous sensibility was perfectly normal. There was a moderate amount of deafness in the right ear, hearing-distance for the watch being $\frac{7}{10}$, but the man had chronic naso-pharyngeal catarrh, and a somewhat sunken membrana tympani, which would account for the deafness. There was no disturbance of vision, no strabismus or paresis of any of the ocular muscles, and the pupils were normal and reacted well. He remained in about the same condition till the last week in December, when he complained of pain and weakness in the lumbar region, became unable to sit up, lost his appetite, and his bowels became obstinately constipated. He next developed some obscure head-symptoms, fell into a drowsy condition, varied with low muttering delirium, from which, however, he could be aroused. He sank gradually away, and died on January 2, 1875, having been deeply cyanosed on the last day of his life. At no time were there symptoms of disease of the eye, though repeated examinations were carefully made with the ophthalmoscope. The day before his death, the pupils became widely dilated. A diagnosis had been made of a low type of meningitis.

Autopsy, thirty-three hours after death.—Bones of the skull normal. The vessels of the dura mater were filled with blood, and there were several points of adhesion between the dura mater and pia mater, on the right side, in the middle and posterior fossæ of the base.

The vessels of the pia mater at the base were engorged with dark blood. The subarachnoid space was very largely distended with fluid, as were also the meshes of the pia mater. The cerebral convolutions were flattened over the vertex, most markedly in the left middle lobe. The lateral ventricles were largely dilated, and filled with clear fluid. There were two or three circumscribed spots of meningitis at the base of the brain on the right side, in the middle fossa, near the median line, but there was very little solid exudation.

On the anterior and inferior surface of the right lobe of the cerebellum, underneath the pia mater, with attachment only to the vessels, was an oval, flattened, slightly nodulated and firm tumor, measuring two inches long, one-half inch broad, and one-half inch thick.

The growth projected into the internal auditory canal, pressed upon the right hemisphere of the cerebellum, the right side of the pons, right crus cerebri, and all the cranial nerves of the right side except the first, second, and ninth pair.

The lungs were emphysematous in the upper lobes, bronchitis all over both lungs, and general pleuritic adhesions. There was hypertrophy of the entire heart, dilatation of the right ventricle, but no valvular disease.

Remarks.—The above narrative is of a case of supposed meningitis, in which a cerebral tumor was unexpectedly stumbled upon at the autopsy, and which had manifested its presence during life by but a single symptom,—the staggering gait,—and this was not so marked as, in the absence of other symptoms, to be regarded as of special importance, and it was masked later in the disease by the symptoms of meningeal inflammation. Another interesting feature in the case was the encroachment of the tumor upon the internal auditory canal and its pressure upon the auditory nerve, which, of course, would account for the deafness. It seems singular that the pressure upon the third, fourth, and sixth nerves should have produced no phenomena in the muscles of the eye, which were carefully examined on several occasions, and found intact. Even the pupil was not affected until just before death. A microscopical examination of the optic nerve and retina revealed nothing abnormal.

The tumor proved, on examination, to be a sarcoma of mixed character, both small round cells and fusiform cells being found, though the former predominated. There was very little connective tissue in the growth, and very few blood-vessels. The tumor was circumscribed, and was entirely devoid of processes, with the exception of the one encroaching upon the internal auditory canal.

Cerebellar tumors are said to manifest themselves almost always by some affection of the optic nerve, either a neuritis descendens or "choked disk;" yet in this, both were absent.

Case II.—D. D., æt. 31, Ireland, coachman, admitted to Charity Hospital December 2, 1874.

The patient's mental condition was so much affected that no clear history could be obtained. The only fact of importance elicited was that about three weeks previous to his admission to the hospital his sight began to fail, and grew steadily and rapidly worse. The patient is a strong, finely-developed man, with dark complexion. His mind wandered at times, and it was difficult for him to concentrate his thoughts sufficiently to answer questions. His general health,

until recently, was perfect, but for about a month he had suffered from constant thirst and hunger, and marked diuresis. Vision was reduced to perception of light, and the pupils were moderately dilated and immovable. He drank an enormous quantity of fluid without quenching his thirst, and passed about three gallons of colorless, perfectly clear urine, which deposited no sediment. Its reaction was acid, specific gravity 1002-3, but it contained neither albumen nor sugar, though repeatedly examined. In the course of two or three days complete amaurosis set in, and he developed a slight muttering delirium at night, and later this came on in the daytime. Both eyes presented a typical case of "choked disk." The optic papillæ and retinæ were enormously oedematous and infiltrated with exudation from the vessels, which in many places were entirely concealed from view. The fundus of each eye was strewn with hemorrhages of varying size, some superficial, others deep in the tissue of the retina and papilla. The media were perfectly clear, the pupils immovable, and there was a slight tendency to ptosis. When spoken to, he always said he felt well, but complained of great thirst. He soon began slowly to emaciate, and incontinence of urine came on.

During the day he now developed an unsteadiness or staggering in his gait, and was also attacked with epileptiform seizures confined to one side, and at times affecting only the arm or the leg. These were infrequent and occurred at irregular intervals, rarely lasting more than a minute or two, and after them he fell into a semicomatose state.

On the 18th of December he began to show some slight signs of improvement; his intellect became clearer, and he spoke more rationally. A diagnosis was made of intracranial tumor, probably at the base of the brain, and involving both optic tracts and perhaps the cerebellum; but it was difficult to account for the great diuresis, unless perhaps the fourth ventricle was involved in the disease. His improved state lasted till the last of December, when he grew worse again; but there was no further return of the convulsive movements of the limbs. On January 16, 1875, a divergent squint of the left eye made its appearance, due to paresis of the internal rectus muscle. His pulse and temperature were taken twice daily, but his temperature never went above 100°, and averaged 98°; and though his pulse occasionally reached 115, yet it soon fell, and did not average above 92.

The process in the eyes went on rapidly to atrophy of the optic nerves, the exudation disappeared, the hemorrhages were absorbed and did not recur, and on the 10th of February the optic papillæ presented the picture of advanced atrophy, their edges sharply defined, the arteries reduced to threads, and the color a brilliant white.

The patient's condition again improved; the emaciation ceased, his appetite became less voracious, and, although he complained of the same devouring thirst, yet the amount of urine voided was somewhat less in quantity. His intellect became clearer; he left his bed and got up, and declared he felt perfectly well but for his blindness.

The treatment in the above case was mainly tonic and restorative, with potass. iodid. in large doses three times a day. On the supposition that the administration of this drug might be influencing the diuresis, it was discontinued; but there was no diminution in the amount of urine voided, and it was therefore again administered.

Are we to suppose that the potash had exerted its absorptive powers on the growth, and caused its gradual diminution or disappearance? or was the

diagnosis faulty? Authorities would have us believe that "choked disk" is always caused by an intracranial growth, and in accordance with this dictum the case must be ranked in this class. But, resting our knowledge on the results of pathological investigation, can we assert that patients may recover from intracranial growths?

Such a case as the one just cited is of great interest so long as the man lives, but just so long does it remain an enigma, the solution of which we can only attain by an autopsy.

Case III.—T. R., æt. 6, a well-developed, bright boy, was admitted to the N. Y. Eye Infirmary, October 12, 1874. About three months before, the boy had received a severe blow on the right temple from a bat, which made a ragged wound about two inches long. He was felled to the ground, lost a great deal of blood, and remained unconscious for nearly forty-eight hours. He recovered, however, and nothing wrong was noticed in his intellect or vision. One week later he fell from a wagon, and struck on the same temple; the old wound was reopened, and again a profuse hemorrhage was the result. When he recovered consciousness, he complained of violent headache, nausea, and vertigo, which lasted almost constantly for four weeks. Since then the nausea and vertigo have disappeared, and the headache has been very slight and inconstant. One week before I saw him the mother noticed that he could not see well, and that he fell over the furniture in the room, and could not find the door.

An examination showed moderately dilated pupils, which reacted well to light, freely movable eyeballs, and no squint. An ophthalmoscopic examination showed an extremely well-marked example of "choked disk" in both eyes. The outlines of the papillæ were entirely lost, the veins immensely engorged and distorted, a mass of exudation on both disks and into the retina immediately around them, and in the region of the macula a peculiar yellowish-white, glistening exudation, arranged in the radiate or stellate form so characteristic of retinitis albuminurica. On questioning the mother, she said the child had of late passed a good deal of dark-colored urine. A specimen was examined at once, but no albumen or casts found. The urine was examined at every visit, but nothing abnormal was ever found. Vision was reduced to perception of light.

October 14.—The child appeared heavy and stupid. Some minute extravasations of blood on the right optic disk. From the history, a diagnosis was made of basilar meningitis, although the presence of "choked disk" would seem to indicate an intracranial tumor. There is no interference in the function of any of the other cranial nerves, and not a sign of any disturbance in the cerebellar functions.

October 16.—The child has lost the dull, stupid look, and seems bright and intelligent, though somewhat quiet. The right optic disk shows signs of atrophy, the exudation is being absorbed, and the arteries seem smaller in size. From this time on the atrophic process went on rapidly; the hemorrhages became absorbed, the exudation into the retina and optic nerve disappeared, the papillæ regained their clearly-defined outlines, and the arteries became almost thread-like in size. The exudation in the region of the yellow spot, however, remained unchanged, and is probably of the same nature as that met with in retinitis albuminurica, viz., a fatty degeneration of the retinal tissue.

The treatment was carefully followed out, but proved of no avail. It consisted in repeated blisters behind the ears and to the nape of the neck, leeches to both temples, potass. iodid., six-grain doses three times a day, gradually increased to gr. xv three times a day,

and atropine instilled daily. After the inflammatory process had subsided in the nerves, resort was had to strychnia, with the faint hope of staying the atrophic process, and one-sixtieth grain was injected hypodermically every day, and gradually increased up to one-thirty-sixth grain, without producing any favorable result, and here we were obliged to discontinue it, as it began to produce the toxic effects. The boy was seen at irregular intervals up to January 15, 1875, and at the last visit the atrophy was complete, the amaurosis was total, and the pupils were widely dilated. The boy's health was perfect, and he was growing rapidly.

Remarks.—This case showed some interesting points. If the pathological process within the skull were a meningitis, it seems very strange that it did not produce any constitutional disturbance. Except during the two days of unconsciousness immediately following the accident, the child was not sick, and complained only of headache and occasional vertigo. Yet there was an active process of some sort going on within the skull when he was brought to the Infirmary, as was proved by the ophthalmoscope.

It could scarcely have been a tumor within the brain, for the lesion followed the accident too closely. Hemorrhage following the accident might have given rise to the signs of intracranial pressure indicated by the "choked disks," but it would also have caused other morbid phenomena of a paralytic nature, none of which were present.

In view of all the facts, it seems possible that there might have been a slight fracture at the base, perhaps produced by contre-coup, which had set up a localized meningitis, and the exudation, whether serous or otherwise, had pressed upon the chiasm or optic tracts, or perhaps upon both ophthalmic veins, though the former supposition is the more probable. From whatever aspect considered, the diagnosis is one of some difficulty, particularly in view of the recovery of the patient.

NEW YORK, March 20, 1875.

A CASE OF ACUTE PHTHISIS.

REPORTED BY GEORGE S. GERHARD, M.D.

THE following notes of a case in the service of Dr. James H. Hutchinson I publish by his permission.

Thomas McG., æt. 21, a native of Boston, and a book-cannasser by occupation, was admitted on February 19, 1875.

He stated that he was taken on the 9th inst., after an exposure while on a debauch, with a feeling of malaise, followed on the evening of the same day by a chill and fever, and on the following day by cough and mucous expectoration, but not by pain in the chest.

His previous health had always been good, and no history could be obtained of his ever having before suffered from any form of chest-disease. He also presented a good family history. His habits had been for some time intemperate, but he had never suffered from venereal disease.

When he was admitted, he had fever, a furred but moist tongue, and cough, accompanied by mucous expectoration. He did not complain of pain in the chest, and there was no marked dyspnoea and no blueness of the lips. There was a good deal of muscular trembling and general prostration, but the patient's mind was perfectly clear. Examination of the chest revealed slight

dulness anteriorly in the left infra-clavicular region, with increased vocal fremitus, and, posteriorly, impairment of resonance over the whole right lung, but the vocal fremitus was somewhat more marked on the left side. Auscultation revealed fine and coarse friction-sounds, and a good many subcrepitant râles both anteriorly and posteriorly, but the latter were especially numerous in the left infra-clavicular region. The heart-sounds were normal. The urine was free from albumen.

He was ordered quinae sulph., gr. j; pulv. ipecac. comp., gr. iij; potass. nit., gr. v; pulv. digital., gr. $\frac{1}{2}$; q. t. h.

On the 20th the muscular trembling had increased, and two ounces of whisky daily were ordered. A.M., temperature 102°, respiration 30, pulse 96. P.M., temperature 104°, respiration 30, pulse 106.

On the 21st, dulness in the left infra-clavicular space persists, and there is blowing respiration in this region, but the other chest-signs remain unchanged. The patient's cough is growing more troublesome, but his expectoration is still bronchitic in character; there is some substernal soreness, but there is no localized pain in the chest, and no pain on full inspiration. Whisky increased to f3vj. A.M., temperature 100°, respiration 30, pulse 94. P.M., temperature 103½°, respiration 30, pulse 94.

On the 22d, A.M., temperature 100°, respiration 36, pulse 86; P.M., temperature 103°, respiration 36, pulse 96.

On the 23d, A.M., temperature 99½°, respiration 36, pulse 96; P.M., temperature 103°, respiration 36, pulse 100.

On the 24th, A.M., temperature 101°, respiration 36, pulse 100; P.M., temperature 101°, respiration 36, pulse 100.

On the 25th the percussion-note at the left apex is dull and somewhat tympanitic in quality, and the râles are coarse and more numerous; posteriorly, there is no marked dulness on either side, but the râles (friction and subcrepitant) are still heard. The patient is very pale and weak, but he takes his nourishment well, and is not delirious. A.M., temperature 99°, respiration 36, pulse 86; P.M., temperature 101°, respiration 36, pulse 96.

On the 26th, cough very troublesome, and the expectoration is now viscid and streaked with blood; dyspnoea increasing, and the lips and nails are bluish, but there is no marked hectic disturbance. The whole left chest is dull on percussion posteriorly, and the subcrepitant râles are very numerous.

The chest was ordered to be dry-cupped. A.M., temperature 101°, respiration 42, pulse 104; P.M., temperature 102°, respiration 36, pulse 96.

On the 27th, slight delirium last night, but mind clear this morning. Dulness over left chest, posteriorly, unchanged; respiration distinctly bronchial in the infra-clavicular region and elsewhere; on the left side it is very harsh, and accompanied by friction and coarse crackling; there are also a good many râles on the right side. Lips decidedly cyanotic; tongue furred, but moist; no nausea or vomiting; bowels confined. Stimulus increased to f3x. Powders stopped, and mixture ammon. carb. and infus. digital., f3ij every alternate two hours ordered. A.M., temperature 102°, respiration 36, pulse 96; P.M., temperature 102°, respiration 48, pulse 114.

On the 28th, percussion anteriorly on left side is of higher pitch and more tympanitic in quality; indeed, below the clavicle there is amphoric resonance and cracked-pot sound. Posteriorly, there is dulness on both sides, but it is especially marked on the left. A.M., temperature 101°, respiration 48, pulse 96; P.M., temperature 102½°, respiration 40, pulse 106.

On March 1, A.M., temperature 101°, respiration 42, pulse 100; P.M., temperature 103°, respiration 42, pulse 104.

On the 2d, A.M., temperature 101°, respiration 42, pulse 94; P.M., temperature 102°, respiration 42, pulse 100.

On the 3d, dyspnœa still more marked, and lips and nails very cyanotic; patient talks a great deal during sleep; pulse very feeble, and somewhat dicrotic; occasional sweating; cough and expectoration unchanged. Dulness greater on the right side posteriorly to-day; other signs as before.

On the 4th, increasing prostration; tongue brown and dry. A.M., temperature 100°, respiration 42, pulse 100; P.M., temperature 102°, respiration 36, pulse 94.

On the 5th, patient very delirious last night, and this morning there is marked mental hebetude and intense prostration. Amphoric resonance on left side anteriorly exceedingly well pronounced to-day.

On the 7th, moribund.

On the 8th, patient died at 2 o'clock this morning.

At the autopsy, which was made fourteen hours after death, the following note was taken. Body much emaciated; rigor mortis well pronounced. The left pleural cavity contains a considerable quantity of serous effusion, and at the base of the lung there are a few adhesions. There is also some effusion in the right pleural cavity, but it is smaller in amount, and of a darker color. There is no enlargement of the mediastinal glands. The left lung is solidified from apex to base by diffused caseous infiltration, and here and there cavities are found, but none of them are larger than a marrowfat pea. Scattered throughout the lower half of the lung there are numerous gray granulations (miliary tubercles). The same granulations are found in the right lung, but they are more uniformly disseminated, and are associated with comparatively few cheesy deposits. The tissue of the right lung is everywhere congested and of a dark color, but it is generally crepitant. There are no excavations in this lung. Heart and abdominal organs healthy. Careful examination of the brain and its meninges fails to reveal the presence of tubercles.

Remarks.—When the patient whose history is given above was admitted into the hospital, the physical signs presented were those of diffused bronchitis, with extensive plastic pleurisy. There was no decided dulness on percussion in any part of the chest, excepting at the apex of the left lung, and the general symptoms could all be accounted for by the physical signs. The persistence, however, of the physical signs, and the increasing dyspnœa and constitutional depression, soon led Dr. Hutchinson to conclude that he had a case of acute phthisis to deal with. The development of tuberculosis was undoubtedly of secondary occurrence, and was probably coincident with the increase of dyspnœa and of other symptoms of deficient aeration of the blood.

There are several points of interest in connection with the physical signs presented by this case, such as the shifting dulness at the posterior part of the chest, and the very remarkable tympanitic quality of the percussion-note on the left side anteriorly. The shifting dulness posteriorly was, of course, dependent upon congestion changing from one side to the other, according to the patient's decubitus; but the peculiarity of the percussion-note in front cannot be so readily explained.

The tympanitic resonance became marked a few

days after the patient's admission, and shortly before his death it exactly resembled that of pneumothorax. The left lung, as will be seen from the notes of the post-mortem examination, was generally solidified, and contained a good many minute excavations, but there was no evidence of there having been air in the pleural cavity.

I have frequently been surprised, in percussing over the anterior part of a pneumonic lung, to find a clear but high-pitched sound brought out, and this in cases where the lung was solidified throughout; but I have never before met with an instance in which there was amphoric resonance in connection with consolidation. It would have been quite impossible, in a case like the present one, to have diagnosticated the development of tuberculosis. The temperature-record shows a marked evening exacerbation, which is usual in acute phthisis, but the reverse of what happens in acute tuberculosis, and the general symptoms might all have belonged to the former disease. That these two diseases are essentially distinct, and that a differential diagnosis can be made, I think any one may be convinced of by reading the report of two very interesting cases by Dr. Hutchinson, in the *Medical Times* for March 1, 1872. In the one disease there is an acute alveolar catarrh, the products of which undergo rapid caseous metamorphosis and lead to destruction of the pulmonary substance. In the other there is a sudden development of miliary tubercles in the lungs, followed by an active catarrhal process, and occasionally, though less frequently than in acute phthisis, by pulmonary excavations. Both diseases run a very rapid course; but this is particularly true of acute tuberculosis, which has been known to terminate in two weeks. In regard to the differential diagnosis of the two diseases, the points of distinction that are especially prominent are those relating to the temperature-records and the relation that the general symptoms bear to the physical signs. The temperature is considerably elevated in both, and a daily exacerbation takes place in both, but, as already stated, it occurs in acute phthisis in the evening, and in acute tuberculosis in the morning. The general symptoms of acute phthisis may nearly always be accounted for by the physical signs, but the two are markedly disproportionate in acute tuberculosis; so much so that it is frequently confounded with other acute diseases, particularly typhoid fever.

As an instance of this great disproportion between the two sets of symptoms, I may mention the following case:

In June, 1874, a colored barber, 22 years of age, whom I had been in the habit of seeing frequently, and of whose previous history I therefore knew something, consulted me in regard to a slight dry cough, and a feeling of malaise, accompanied by loss of appetite and so-called biliousness. I examined his chest, but was not able to detect any abnormal sign, and finding, on inspection of the throat, that there was a good deal of follicular enlargement, I concluded that this was the cause of the irritative cough, and that it was connected with the symptoms of constitutional depression.

I prescribed for him accordingly, but a few days afterwards he again came to see me, and I was at once struck with his altered appearance. He had high fever, and was so weak and was suffering so much from dyspnoea that he could scarcely cross the room without fairly panting for breath. His cough had also somewhat increased, but it was still unaccompanied by expectoration. Examination of the chest revealed universal enfeeblement of the respiratory murmur, but there was no dulness anywhere, and there were no adventitious sounds to be heard. The case, of course, resembled very closely one of typhoid fever, but, taking into consideration the absence of intestinal symptoms and a known hereditary predisposition, I diagnosed acute tuberculosis. He was removed to the country, and died eight or nine weeks after the commencement of his illness. No autopsy was made, but, from what I afterwards learned of the progress of the case, I feel sure that the diagnosis was a correct one.

ON THE MISINTERPRETATION OF APPEARANCES UNDER THE MICROSCOPE.

BY CHARLES STODDER, Esq.,

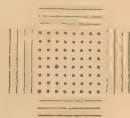
Boston, Massachusetts.

Read before the Biological and Microscopical Section of the Academy of Natural Sciences, and recommended for publication in the Philadelphia Medical Times.

ALL text-books caution novices against misinterpreting what they see, or think they see, in their microscopes. Experience teaches that the caution is needed even by many who have long used the instrument. Objects viewed by transmitted light are seen under such different conditions, and the light received by the eye has been subject to such entirely different influences, from those that affect ordinary vision, that these conditions and influences must be carefully considered in forming any conclusion of the structure of the object studied.

A thin, plain plate of any homogeneous substance, such as silica or glass, is as invisible as air. Let the plate be curved or corrugated, or vary in thickness, and it becomes visible. Why? Not from any change in its nature, but because of its action on light. It both reflects and refracts; consequently, different and varying intensities (and colors, unless homogeneous light is used) reach the eye, and thus render visible the corrugation or inequalities of the thing under investigation. Every particle of matter not absolutely opaque acts on transmitted light as a lens, or prism, or group of minute prisms, no matter what its size or shape. Every one of the most minute specks of matter acts as a lens, and presents to the eye, under a certain magnification and focal adjustment, the appearance of a dot, bead, or spherule. The combination of two curved surfaces will act as a lens, and show beads where none exist in nature. This fact I announced many months ago. I send with this for the Section a slide of diatoms, from Bodington, Maine, among them numerous Pinnulariæ of several species (so called). Occasionally two frustules will be found lying across

each other, the costæ of one crossing the other at some angle. I have made (in my unskilful way) a sketch of one such instance, to which I will call your attention. The costæ are smooth and clean. Wherever those of the two frustules intersect each other (at nearly a right angle) we see rows of distinct, apparently spherical beads, but the evidence presented in the four directions on every side is conclusive that no beads exist there,—that what we actually see are “ghost beads:” an optical effect, and the result of the passage of light through a transparent refracting medium with curved surfaces. Numerous other examples similar to this are to be found on this slide.



Now, does not this present strong evidence that the so-called beadings seen in scales of insects, about which so much has been written, are also optical effects? So, too, of the “beading” of many of the diatoms.

Dr. Woodward, of Washington, has made a photograph of *Surirella gemma*, showing the whole surface broken up into beads, or dots,—an appearance that can be obtained by proper management of the illumination, but which is not the true resolution. E. Hartnack published, a few years ago, his idea of this diatom, derived from his use of his very high powers. He described the appearance as “flat hexagons.” It is scarcely possible to conceive that he could have taken Dr. Woodward’s beads for hexagons; so it is only a reasonable inference that he (H.) saw something else. It is well known of that diatom that between the strong, sharply-marked costæ there is a set of fine transverse lines; but crossing these at right angles is a set of very fine longitudinal striæ, which can be seen only with a good instrument and with very careful management of the illumination. When these are in sight the transverse lines are *absolutely invisible* with the very best glasses; and with the best it can be demonstrated that Hartnack’s “flat hexagons” have no existence, and were a theoretical explanation. The longitudinal striæ are not continuous, but interrupted at frequent intervals. This may be owing to the inequality of the surface of the plant. I explain the appearance of the dots or beads as caused by the intersection of the two sets of striæ on different planes with each other, so illuminated that the light is partly received from each. If true beads existed as represented in the photograph, it is difficult to conceive of any illumination that could cause them to disappear. The study of other genera of the Diatomaceæ only confirms me in this opinion. *Navicula cuspidata* Kutz is a well-known form, described as having “very fine transverse striæ.” My friend and correspondent J. E. Smith, of Ashtabula, Ohio, discovered that this species has exquisitely fine longitudinal lines also. By certain illumination this may be made to show “dots.” Examined with a one-fiftieth, I demonstrated conclusively that the two sets of striæ are on different planes, either of which could be brought into focus *without the other*. That there are a vast number of species of diatoms with true “beads,” I admit.

I send a slide from mud bottom of Great Herring Pond, Cape Cod, obtained several years ago by officers of the United States Coast Survey. This material supplies an abundance of *Stephanodiscus Niagara* Eh.,* first found by Prof. J. W. Bailey at Niagara Falls. This species presents fine examples of true dotted or bead structure, and the contrast is very great (under a high power and good definition) with the optical beading, though under other conditions, and without warning, the differences are easily overlooked.

Too many histologists have a poor opinion of the study of diatoms; but errors in the interpretation of their appearances illustrate the errors that may, and do, occur in the study of other subjects, while, so far as is yet known to science, the Diatomaceæ afford by far the best material known for the study of the instruments. The lenses that will best show the most minute structure of a diatom may, *a priori*, be taken to be the best to exhibit the most minute "lines and dots" that make up the aggregate of all structures; and I believe the experience of histologists *who have used a large variety of instruments* will confirm this. The one who has used only a very few lenses in the course of years, though he may be most accomplished in his own specialty, and be able to do more and better with his own lenses than any one else can with them, is not competent to make comparisons or judge of the value of other lenses in his own work, until he has actually worked with them.

TRANSLATIONS.

ACTION OF ESERINA IN CHOREA.—Dr. E. Bouchut (*Bull. Gén. de Thérap.*, April 13) records the results of four hundred and thirty-seven observations upon the action of eserina (the active principle of calabar bean), particularly in the chorea of children.

He finds that this alkaloid, while diminishing muscular contractility, augments that of the smaller vessels. It may be employed hypodermically or by the stomach, and should be given fasting. It may be given hypodermically in the dose of one-twentieth to one-twelfth of a grain, and, as its effect only lasts one to three hours, the dose may be repeated until one-fourth to one-third of a grain is given in twenty-four hours.

The effects of eserina are observed within a few minutes from its administration, and these are constant in the dose of one-twentieth to one-twelfth of a grain. It usually produces paleness, with contraction, occasionally followed by diminution of rate in the pulse. Nearly all the children to whom eserina was administered experienced malaise, burning pains in the epigastrium, with gastralgia, nausea, and rejection of stringy sputa.

Eserina occasionally causes bilious vomiting; it does not modify the temperature sensibly. In the doses above mentioned, eserina never produces colic or diarrhoea. Given internally, it usually produces no effect upon the pupil. It frequently causes profuse perspiration of the face and body. Paresis, and occasionally transitory paralysis of the diaphragm, are among the most serious and painful phenomena produced by this remedy.

* This same diatom is also abundant in the Toome Bridge, Ireland, deposit (fossil?), though the books do not mention that it has ever been found in Europe.

*When the action of the eserina is spent, the patients return to their normal condition, and the substance does not seem to have any consecutive effect. It is not found in the urine, at least after administration in these small doses. Given in chorea, eserina arrests the movements while its effects last, and moderates them little by little in the intervals, so that this disease is cured, on the average, in about ten days. The effects of the remedy are more certain when it is given hypodermically.

Dr. Bouchut has never seen tremor or convulsions produced by the use of eserina, and thinks it probable that these symptoms are not likely to be brought on unless where the remedy has been employed in large and toxic doses. X.

OPERATIVE PROCEDURE FOR THE EXTRACTION OF TUMORS OF THE MAXILLARY SINUS.—Dr. Armand Després remarks (*Bull. Gén. de Thérap.*, April 15) that no rule has ever obtained in operations upon this portion of the body, each surgeon following that plan which has seemed most fitting in any given case. After giving the methods of several surgeons for opening the sinus to extract an exostosis, Dr. D. gives the following as performed by himself:

An incision is made, extending from the inner angle of the eye at the insertion of the orbicularis tendon down the side of the nose, following the contour of the ala, and, when the naso-labial sulcus is reached, extending downwards along this to its termination, care being taken not to penetrate the mouth. The bone is then laid bare, the periosteal-cutaneous flap being carried back until the malar tuberosity is attained.

The ascending process of the maxillary bone is then divided, by means of cutting-forceps, from the edge of the nasal fossa to the lachrymal sac. Then the anterior wall of the maxillary sinus is divided by transverse incision, just under the malar bone. Raising the bone then, by the aid of a lever, it breaks off on a level with the edge of the orbit and the malar tuberosity. The bony fragment, pentagonal in shape, is then removed, and the tumor, which may be easily gotten at, is removed, either whole or piecemeal, according to its size. The cutaneous incisions cut the nasal branch of the facial artery, and the suborbital artery; they may be ligated if it is thought desirable, but simple pressure often serves to arrest the hemorrhage. There are no other difficulties in the process; section of the bone with the cutting-forceps is easily performed, and pressure causes it to break evenly at the diseased point. Silver wire sutures may be used alongside the nose and at the ala, while the twisted suture is to be employed to unite the naso-labial sulcus. Illustrations are given by Dr. Després, showing the very slight scar which remains subsequent to the operation.

GALVANO-CAUSTIC TREATMENT OF NEW GROWTHS, ETC., IN THE AUDITORY MEATUS.—Dr. L. Grossmann contributes a series of papers on this subject to the *Wien. Med. Presse* (Nos. 11, 12, 14, and 15, 1875). He believes this method to be much better than either of those formerly in use—the knife or caustic—for the removal of fibrous polypi in the external auditory meatus. Perforation of the tympanum by this method is also, Dr. G. thinks, preferable to either myringotomy or myringectomy, since an opening can be made as large as is desired, with such rapidity as to cause almost no pain.

This operation presents peculiar advantages for the removal of foreign bodies from the external meatus when the usual means, by a stream of water, etc., have failed. In addition, loss of blood and the effects of reaction are also avoided. The pain caused by the glowing wire is not so great nor so lasting as that experienced in operations by the knife.

Finally, it is possible to reach by the galvano-caustic wire localities which cannot be attained by other instruments, and the wound made by this requires no subsequent dressing. X.

CRAMP OF TELEGRAPH-OPERATORS.—M. Ominus contributes an observation on this affection to the *Gaz. Méd. de Paris*, April 10. After alluding to the cramp due to repeated movements of certain muscles, and observed not only among writers but also among designers, engravers, and musicians, he gives a case of a similar character occurring in a telegraph-operator.

The patient, who had used the Morse instrument for nineteen years, first noticed a difficulty in making the dots, and especially a succession of dots. The first letters which he found difficulty in forming were *Z*, which is indicated by three dots, *z*, which is indicated by two dots, and *u*, which is indicated by two dots and a line. *D*, which is formed by a line and two points, he found easier, because the first movement finishing the line gave greater assurance of movement. Soon it became impossible to make dots at all by the ordinary manipulation, and the patient then had recourse to his thumb, which he used for two years. At the end of that time the thumb was seized with cramps, and he then had recourse to the index and medius successively. Each of these was used two or three months, and then became useless on account of cramp. Even the use of the wrist, which he finally resorted to, gave rise to trembling in the fore-arm, and at last to the same symptom in the leg of that side, as well as pain in the neck, and sometimes vertigo and insomnia. The only method of relieving these symptoms is to change the instrument employed, using that known as Hughes's, and alternating this with Morse's. X.

THERAPEUTIC NOTES.

IN RHEUMATISM.—

R Trimethylamini, ℥iv ad ℥viij;
Syr. zingiberis, ℥i;
Aq. menth. pip., ℥i.—M.

Take at intervals of one to three hours until pain is relieved.

FORMULA FOR THE ADMINISTRATION OF CROTON-CHLORAL HYDRATE.—

R Croton-chloral., gr. xxx;
Glycerinæ, ℥iiss;
Ext. glycyrrhiz., ℥i;
Aq., et syr. simpl., aa f℥iiss.—M.

Tablespoonful *pro re nata*.

PILLS OF THE ABOVE.—

R Croton-chloral.,
Pulv. glycyrrhiz.,
Confect. rosarum, aa gr. xv.—M.

Ft. in pil. no. xx.

IN PITYRIASIS.—

R Ol. theobromæ,
Ol. ricini,
Ol. amygdalæ, aa ℥v;
Hydrarg. sulphat. flav., gr. xv.—M.

LOTION IN ERYSIPELAS.—

R Camphoræ,
Acid. tannic., aa ℥i;
Etheris, ℥i.—M.

Bathe the parts adjoining the diseased skin every two or three hours, or oftener.

DIARRHŒA MIXTURE.—

R Olei ricini, ℥xxiv;
Sp. chloroformi, ℥iiss;
Sol. morphinæ mur., ℥i;
Pulv. gum. acaciæ, ℥iiss;
Syrupi, ℥ss;
Aquæ, ad ℥iv.—M.

A dessertspoonful every hour and a half until the bowels are quieted.

PURGATIVE IN DYSPEPSIA ACCOMPANIED BY CONSTIPATION.—

R Mass. hydrarg.,
Ext. colocynth. comp., aa gr. xxx;
Pulv. ipecac., gr. iii.—M.

Ft. in pil. no. xii.

Two of these are to be taken every second or third night, and followed by a Seidlitz powder the next morning.

CHLORAL SUPPOSITORIES.—The production of a chloral suppository containing a sufficient proportion of this drug to cause sleep has heretofore been deemed impossible. M. H. Mayet, pharmacien, of Paris, has, however, devised the following formula, by which he manages to get forty-five grains of chloral in each suppository:

R Ol. theobromæ, gr. xxx;
Cetacei,
Pulv. chloral., aa gr. xlv.

For one suppository.

These suppositories are of good consistence, and may be easily put into use.

INJECTION FOR CYSTITIS.—

R Sodii hyposulphit., ℥iv;
Aq. destillat., lb. i, ℥iv.—M.

This solution may be employed in five injections, in chronic catarrh of the bladder, when there is pain and the carbolic acid injection cannot be employed.

LOCAL ANÆSTHETIC.—

R Pulv. camphoræ, ℥iiss;
Ætheris sulph., ℥v.—M.

Rub into the skin for a few moments at the locality where it is desired to produce anæsthesia.

IN DIPHTHERIA.—

R Pulv. cubebis,
Aq. menth. pip., aa ℥v;
Syr. aurantii flor., ℥vii;
Aquæ, ad f℥iv.—M.

One or more tablespoonfuls for an adult, every three or four hours.

ANTI-GASTRALGIC DROPS.—

R Tinct. nucis vomicæ,
Tinct. castorei, aa ℥ss.—M.

Two drops during the paroxysm, in half a wineglass of infusion of chamomile.

CAMPBOR OINTMENT.—

R Pulv. camphoræ, gr. xv;
Glycerinæ, q. s.;
Axungia, ℥i.

Useful in erythema and in vesicular and squamous affections of the skin.

GARGLE IN SYPHILITIC ULCERATIONS.—

R Hydrarg. chlor. corros., gr. ii;
Glycerinæ, ℥iv;
Aquæ, ad f℥viii.—M.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MAY 15, 1875.

EDITORIAL.

OWING to the length of the letter which we print from our correspondent at the meeting of the American Medical Association, we lessen to-day our usual quota of editorial matter.

THE meeting of the American Medical Association just closed appears to have been socially a very successful one, there having been a large number of delegates in attendance, and a universal spirit of fraternity and good feeling having prevailed. The presence of a large delegation from Boston was a novel and praiseworthy event. This delegation, we happen to know, went home in a state of great satisfaction with their trip; so that it is to be expected that the effort of our Eastern brethren will not be a spasmodic one, but that hereafter New England will always be well represented. The delegation from Philadelphia was, unfortunately, a small one; but, as it was headed by Dr. Gross, it played a fairly prominent part in the sessions of the Association.

WE notice in this week's *Chicago Examiner* "The New Scriptures according to Tyndall and Others," taken from the *Canada Lancet*. The travels of this *jeu d'esprit* have been somewhat remarkable. Originating in Cincinnati, it was copied, some months since, from our columns into the *British Medical Press*. After a sufficient length of time, it reappeared in Canada, "from one of our transatlantic contemporaries," and has at last reached Chicago. We commend the *Medical Examiner* as a live paper, dealing in the freshest intelligence.

CORRESPONDENCE.

LOUISVILLE, May 6, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Although it appeared to be your desire for me to report the proceedings of the American Medical Association in regular form, yet I have found so little formal material of general interest and importance, and so much of outside matter, that I beg to offer my account in the shape of a letter.

On Monday evening the Association of the Medical Editors of the United States met in a parlor of the Galt House. The exact aims or advantages of this association are as indefinite as the outlines in a London fog or in the smoke of the Louisville bitumen. On the present occasion, Dr. Edgar, of St. Louis, the President, read an address, which was simply the best thing of the sort I have ever had the pleasure of listening to, and which I hope will be re-echoed by the medical press throughout the length and breadth of the land. The subject of his remarks was medical advertising; not so much the forms of it which are met with in the East, as the far more rank and noxious methods which, it appears, can only be produced upon the rich soil of a comparatively new country.

Nothing that the *Times* has ever said portrays in as dark but true colors the utter hopelessness of the present organization of the profession in this country as does the following sketch which Dr. Edgar drew of the way in which medical schools spring up in a night, like deadly fungi:

"A dozen or fifteen or twenty doctors, more or less, meet and organize themselves into a medical faculty; a charter is procured, and the chairs 'panned out' among them, and circulars scattered thick as black-birds in autumn, heralding the wonderful advantages of this new school. A card is in all the publications of the city, secular and scientific; thus no means are spared to make known that Prof. A. has the chair of obstetrics, and Prof. B. that of surgery, etc., to the end of the list; then come as many more names (with their addresses) as assistant lecturers, waiting to don the discarded mantles of their superiors. In this way, twenty-five or thirty doctors are advertised into practice over their neighbors, often every way their superiors (except, perhaps, the teacher of chemistry, who has to be paid, as the public have little use for his wares).

"Other professional men, observing the success of this shrewd trick to inveigle the public, and seeing no other way to keep even in the race, organize another school, and the community is startled by the announcement of as many more professors in medicine, born in a day. Thus a city of a hundred thousand inhabitants may boast two, or perhaps three, medical schools, equipped, and in full blast, with large classes, where fifty properly qualified students it might be difficult to find. By 'beating the brush' in all directions, and offering all admission who apply, with or without education, with or without money or price, large classes are collected; and, if the graduating list of either school is not quite

satisfactory (on account of the nine months' short cut), there is generally timber enough at hand, none the worse for having been used, half a dozen or more 'ad eundem' are added, and the bill is filled, the effect upon the public satisfactory, which, of course, is the end sought."

The President of the Association then at length discussed the effects of this practice upon the profession in the United States; but the utter ruin of professional *esprit de corps* and culture, the bitter discords, the vast hordes of uneducated men, which are the necessary fruit of such sowing, need no advertising to be known. Only those who see the results of this system close at hand can, however, appreciate the magnitude of the evil; but the fact that, instead of the dozen schools required to supply the natural demand of the country, there are about one hundred, may give some idea of the necessity for reform. I may mention, *en passant*, that in Cincinnati alone there are six medical schools of various character; that in Louisville a "spring course" enables a man to graduate in nine months (of study?); that in the same city the lectures are practically free, in that a "free scholarship" is offered for every State Senatorial district in the South; and that in Mobile and Charleston the tuition is offered absolutely without cost.

Under the shadow of these institutions the great West is overrun with the men who are rather John the Baptists for the undertaker than the enemies of that necessary evil.

Dr. Edgar may or may not be correct in asserting that at present "the facts are fast becoming known throughout the civilized world, and America is fast becoming the promised land for the quacks and impostors in medicine of the world. The men who fail to pass the Government boards for license, either in Europe or South America, flock to the United States for an open field." But certainly the evil tidings must continually spread more and more, and more and more reap destruction for the unfortunate people of these United States.

It is easy to denounce, but it is harder to prescribe a remedy; and the great merit of Dr. Edgar's address was that he did show most conclusively the true solution of the problem. His diction was so clear and his blows so direct that his very words were golden. After portraying the self-evident fact that the schools and the schoolmen must of necessity be opposed, as a rule, to any reforms in medical education, because such reform must render narrower the entrance to the profession, and must, therefore, wipe out entirely many of the schools, and lessen the value of others as advertising mediums, Dr. Edgar says,—

"Some doctors profess to believe that 'as the masses improve so will the average doctor,' that the supply will meet the demand; than which a greater fallacy was never conceived. Is not the average intelligence of the masses in the United States equal at least to the masses of Europe? Yet the doctors of this country do not compare with those of the European States in general culture or medical acquirements. Let no one deceive

himself; in every country where the doctor stands high, the entrance to the profession is guarded by a State Board, not instituted to protect the doctor against quacks, but to protect the community against incompetent doctors. The practice of medicine and surgery has been so far monopolized in the cities of this country by the schoolmen that every doctor is brought to believe that it is indispensable to a good paying practice to be advertised as a professor in a medical college."

The remedy which Dr. Edgar proposes, and which is evidently the only possible one, is the formation of State Examining Boards; a diploma from which shall be necessary for the practice of medicine in the various States. Your readers will remember that the *Times* has already advocated this plan, but never with the force and persistency it deserves. It would occupy too much of your space to follow Dr. Edgar through the further details of his address, but I would call attention to one fact already hinted at, but which he insists upon and makes very clear,—namely, that the opposition to the formation of State Boards comes from the professors who do so abound. Many of these gentlemen talk about the "needs of poor communities," "vested rights," and what not; tack on to bills amendments seemingly fair, but really fatal in their character, or by various devices seek to maintain the present system,—all of which, coming from men whose interests are at stake, deserves only the answer given by the goat to the fervent public prayer of the hypocrite—Bah! After all, however, the whole profession is not as yet entirely resolved into college faculties, and it is to be hoped that the outside profession will place upon medical teachers the restraining influence of a stern public opinion, and will watch most narrowly the course of that portion of the medical press which is bound hand and foot to the Delilah of school interest, and, if need be, take measures to enlighten the laity, whose dearest interests are at stake, and who must be the final arbiters in the matter.

Singularly diverse from this clear solution of the present problem was the extraordinarily wild and impracticable proposition made by the President of the American Medical Association, in his opening address. He proposed "that it be solemnly resolved by this meeting that it shall be regarded as derogatory to the character of any physician, in any part of the United States, to take under his care, as a student of medicine, any one who cannot exhibit evidence of having taken a degree in a regularly-chartered college, or a certificate of qualifications, necessary to become a student of medicine, from a Board of Examiners appointed for that purpose by the American Medical Association."

A committee was appointed at the last session of the American Medical Association to report "on what legislative action, if any, can be taken to enforce by law an examination of all persons who enter upon the practice of medicine and surgery, by a State Board of Medical Examination," regardless of diplomas; and it is to be hoped that they will show some wisdom in making that report. The only thing the Association can do is to call the attention of the State Societies to the subject of

State Examining Boards, and to urge upon them the necessity for immediate action.

The President's address, on the whole, was a good one. He began by calling attention to the objects for the furtherance of which the Society was first organized. These objects were as follows. *First*, To give emphatic expression to the views and aims of the medical profession in this country. *Second*, To supply more effectual means than have hitherto been available here for cultivating and advancing medical knowledge. *Third*, To elevate the standard of medical education. *Fourth*, To promote the usefulness, honor, and interest of the medical profession. *Fifth*, To enlighten and direct public opinion in regard to the duties, responsibilities, and requirements of medical men. *Sixth*, To excite and encourage emulation and concert of action in the profession. *Seventh*, To facilitate and foster friendly intercourse between medical men. *Eighth*, To take cognizance of the common interest of the medical profession in every part of the United States.

Dr. Bowling then sketched discursively the extent to which these intentions had been carried out, and the difficulties that had been met with. The most interesting part of his address was that which detailed the fierce fight that has been waged between the Association and the medical schools, commencing almost with the infancy of the organization, rising into a great storm at Nashville in 1857, and ending, according to our President, last year, in Detroit, by the expulsion of the representatives of the schools from the Association. It is, however, evident that the battle is not yet over; and it is to be hoped that the Association will never cease its efforts till the heel of the law is placed upon the medical colleges whose unbridled license has been the curse of the profession and the bane of the people.

To expect the address of a President of the American Medical Association not to contain untrue flattery of the American profession is to fly in the teeth of the traditions of the elders; but it would be far better if the truth were told, that, skilful as our practitioners are, yet to the higher thought and knowledge of the world we have contributed almost nothing. Dr. Bowling is not, however, entitled to the least censure for conforming with orthodox usages and maintaining the patriotism of the Cross-Roads, by asserting, "that our own country has, during this period [the century], contributed as much to this development as any other, no unprejudiced observer will dispute." On the whole, considering the circumstances of the occasion, the various public writings of the President, and the many demoralizing examples which exist, Dr. Bowling is entitled to great credit for the moderate and gentlemanly tone of his address.

Yesterday morning Dr. A. H. Daud, General Secretary of the Canadian Medical Association, was presented to the meeting as a representative of the sister body. After his speech of thanks, a tall Texan, with a voice whose stentorian tones hushed all to silence, "declared that he could only wish to Dr. Daud and his people the same good luck which had happened to his

State, namely, to be annexed politically, socially, and professionally to the great American Republic."

The desire was exceedingly well "put," and brought rounds of applause. The humorous Texan is certainly a man of refreshing and most praiseworthy originality. According to his statement before the Obstetric Section, he came to Louisville upon a mission. Japhet was in search of his father, but he was in "search of a pessary for his daughter."

Dr. Gross, by special permission, read an address on "The Lost Arts in Medicine." Dr. Gross shares with Dr. N. S. Davis, of Chicago, the favor of the Association. Indeed, between them they may be said to have a builder's lien upon the organization. The influence which Prof. Gross wields appears to be due largely to his magnificent and richly-deserved surgical reputation; whilst Dr. Davis atones for his lack of this overpowering reputation by his close attention to the Association, his intimate knowledge of its regulations, and the clear-headed manner in which he directs its deliberations. It is stated that he has not missed a meeting for twenty-five years. Dr. Bowling is precluded by his age from actively presiding, and the gentleman who rules for him appears to have but little knowledge of the proper methods of ruling. If it were not for the constant interposition of Dr. Davis, the procedures would seemingly be very chaotic. When Prof. Gross offered to read his address in the general session, no one seemed to have any knowledge of the existence of any by-laws upon the subject; but when some comparatively obscure individual presumptuously essayed to follow in the wake of the great man, it was very instructive to see Dr. Davis, in his ringing, impassive, and implacable tones, call the attention of the meeting to the fact that the by-laws ordered that all volunteer addresses should be referred to their appropriate Sections.

The address of Dr. Gross was really a plea for the use of blood-letting. He reprobated in the strongest terms the present total abandonment of the practice, and entered at length upon the consideration of the causes which have led to it. The peculiar power of Prof. Gross was of course apparent in the address; but when he discoursed most closely upon therapeutic points, the well-known truth that surgeons rarely have clear and just ideas of medical therapeutics was very apparent, and the old saying of *ne sutor ultra crepidam* no doubt flashed across the inner consciousness of many of his auditors. To classify together aconite, digitalis, and veratrum viride is certainly almost to commit the unpardonable therapeutic sin. The proposition which Prof. Gross maintained, that bleeding has been too universally abandoned, is undoubtedly correct, but the assertion of the value of the remedy in such diseases as chronic phthisis, cholera infantum, and "even anæmia," is assuredly at variance with all the established facts of modern pathology and therapeutics.

The learned professor probably had in his mind the fact that exaggeration on the part of an orator is often necessary to bring the audience up to the proper level.

A palpable influence upon medical practice will, we doubt not, be perceptible in the journals of those sections of the West where the name of Gross is almost that of a demi-god. As we heard affirmed by one of the most eminent of the Western practitioners, the address will probably do a great deal of harm, and even cost a good many lives; but if our venerable representative has succeeded by the audacity of his statements in resurrecting venesection, humanity will, probably, be in the long run indebted to him, for the mode of treatment will no doubt soon settle to its true position.

The address of Dr. Austin Flint, upon the "Advances of Practical Medicine," of necessity contained nothing that would be new to the readers of a live journal like the *Times*, but it was a very well-digested, scholarly *résumé* of progress, and, as it was well delivered, riveted the attention of the body.

The only portions of to-day's (May 6) proceedings worthy of notice were the addresses of the chairmen of the Surgical and Obstetrical Sections. Dr. Moore, of Rochester, read an exhausting and exhaustive essay upon "Transfusion." It is a matter of profound wonderment that human nature on the platform is habitually so utterly inappreciative of and tyrannical to human nature on the benches, especially as the benches in the long run usually wreak sufficient vengeance upon the platform. Dr. Moore thoroughly wearied out his auditors, before he came to the interesting portion of his essay, by a long encyclopædic review of the literature of the subject,—a *résumé* which after all was no more complete than various articles which have appeared in the journals. When, however, the doctor did strike the ore-vein, the lead was a rich one. Several interesting cases of transfusion were reported, but offered nothing absolutely new except in the mode of operating. In this, however, it may be that Dr. Moore has made a very decided step in advance. As is often the case, although his theory is unproven, and probably false, its fruits in the efforts to which it has led have been very good.

As is well known, blood exposed to the air coagulates in a very few minutes. Dr. Moore believes that before the blood has been rendered unfit for use by actual coagulation there is a period at which its vitality is enormously impaired. It is, however, well known that blood which has some time previously actually undergone coagulation has been used hundreds of times in transfusion with the best of results. It therefore appears to be a pure assumption that in coagulation the vitality of the blood is lost, and it is much more improbable that before coagulation any change occurs. Moreover, there are two known tests of the life of blood,—*i.e.*, the movements of the white blood-cells, and the power of the red disks to absorb oxygen; and even long after coagulation both white and red corpuscles still give evidences of full functional activity.

The theory of Dr. Moore, true or false, impressed him with the idea that immediate transfusion is the proper method, and that the saving of time during the operation is of the utmost importance, and led him to

adopt the following method. A cylindrical india-rubber bag, about five or six inches long, and capable of holding as many ounces of blood, is to be provided. At its lower extremity it is to be closely attached to one arm of a canula having two arms at right angles to each other; the free arm of the canula is to be inserted into the vein of the receiver, the cephalic vein just above the bend of the elbow being the best, because straightest and allowing most readily the admission and retention of the canula. In inserting the canula, Dr. Moore exposes the vein by an incision about an inch in length, tears away the connective tissue with the blunt end of a coarse sewing-needle, and passes a narrow tape under the vessel. The vein is now clipped with a pair of scissors, according to the method of Nélaton, so as to make a valvular opening, into which the canula is inserted for three-quarters of an inch, and the tape tied around it. The donor and receiver are now placed side by side in such a position that the hand of the latter rests upon the lap of the former, whose arm in turn is extended across and above that of the receiver; an india-rubber funnel having been provided, the vein of the tightly-bandaged arm of the donor is opened by a free incision, and in the first gush which pours into the funnel, whose point is at the bottom of the bag, all the blood that is needed is usually received. Instantly the operator, who stands behind and between the parties, cuts the bandage, claps a compress over the wound, and bends sharply the arm of the donor upon itself. In this way he arrests the hemorrhage instantly, so that the man may stand aside. The operator now stretches upwards the cylindrical bag, previously supported by an assistant in front, doubles the free end shortly on itself, and rolls over and over the fold thus formed along the little bag so as constantly to force the blood into the vein. Dr. Moore insisted especially on the rule of *not compressing* the bag, but of allowing its elasticity to supply the motor power to drive the blood into the vein. He states that he had operated in the method just described successfully in forty-two seconds, and believes that fifty seconds is an abundant time.

The address of Dr. Byford was upon the use of injections of ergotin in uterine fibroid. The essay was a very thorough and creditable one, but contained reports of so many cures at the hands of his Western confrères that a very learned gynæcologist who sat near the writer suggested that some of the results were probably due to the difficulties of diagnosing between phantom tumors, localized peritoneal exudations, and true fibroids. Some of the cases were seen by Dr. Byford himself, and are, therefore, scarcely open to suspicion; but it would require careful consideration from a very able gynæcologist to form a fair judgment upon the value of his evidence. As your correspondent's studies of this branch have been pretty much limited to discovering the best form of a speculum and the best methods of introduction of the same, he consigns Dr. Byford to the tender mercies of that "white-livered Philadelphia grammarian" who in time past was so successful in improving his literary productions.

The address upon State Medicine was to have been read to-day, but the grievous prolixity of Dr. Moore forced the postponement of Dr. Bowditch's address until to-morrow.

The delegates of the Association are now all in, and it is possible to form an opinion as to the *personnel* of this year's meeting. There are nearly five hundred in all, representing the following States and Territories: Alabama, Arkansas, Colorado, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Virginia, Wisconsin.

I believe it is generally conceded that the men are more than usually representative. Boston is especially well represented by such men as Drs. Bowditch and Clark, Dr. Bixby, an old partner of Dr. Storer, and Dr. Chadwick, the secretary of the district medical society; New York has some men of prominence, such as Flint, Sims, Sayre, and Jas. R. Wood; and Philadelphia has a small delegation headed by Gross and Atlee. Probably to the superior character of the delegates are owing the grave decorum and general good feeling which have characterized the deliberations of the Association.

Numerous papers have been read in the various Sections, some of them excellent, many of them feeble, and not a few absolutely puerile. It is bad enough to have gentlemen, who mistake themselves for great luminaries, reflect very glimmeringly but very lengthily the light of ancient text-books, but assuredly some one should hold to a stern reckoning those officers of sections who allow this unmerciful persecution of the members who attend. The law clearly requires that no papers shall be introduced which have not been submitted to the Secretary a month prior to the meeting, and approved of by him after examinations. Loud complaints concerning the Obstetrical Section have especially been made. But, from what I have seen, I do not believe that this Section has been as badly afflicted as some of the others.

The Nominating Committee have selected Philadelphia as the place of meeting next year, and Dr. Sims as President. Drs. Drysdale and Frické, it is whispered, are to replace Drs. Stillé and Murray Cheston on the Publication Committee.

J. Marion Sims was born in Lancaster district, South Carolina, January 25, 1813. He graduated at the University of South Carolina, situated at Columbia, in 1832; subsequently attended medical lectures in Charleston; and in 1835 received the degree of doctor of medicine from the Jefferson Medical College of Philadelphia. Dr. Sims began his professional career with Dr. W. O. Baldwin, of Alabama, in and around Montgomery, they being friendly contemporaries rather than partners or rivals. He acquired a high reputation in the treatment of diseases of the uterus and injuries to females while in Montgomery, and there established a private hospital for females. In 1853 failing health caused Dr.

Sims to leave his Alabama home and locate in New York. Previous to his removal he married a daughter of Dr. B. Rush Jones. His career in New York is well known to the profession. In 1861 he left the United States, and did not return until 1868. During this period he practised medicine in London and in Paris.

The Association has been very handsomely entertained during its stay by various citizens, and Dr. Edward Richardson, Chairman of the Committee of Arrangements, deserves great credit for the manner in which the work has been performed. It is said that the profession at Louisville is very much divided by bitter feuds, but on the surface all has been as placid as a summer day. The Convention does not close until to-morrow, but very many of the delegates have already left the city.

Yours truly,

PONTIFEX MAXIMUS.

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

MARCH 1, 1875.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

PRESENT, Messrs. Neill, Morris, Tyson, I. Norris, Holman, Pierce, Seiler, and Richardson.

The minutes of the previous meeting were read and approved.

An interesting article "On the Misinterpretation of Appearances under the Microscope," by Mr. Charles Stodder, of Boston, Mass., Corresponding Member of the Section, was then read by the Secretary. This paper pointed out very clearly certain errors into which a want of care and caution was liable to betray microscopists, and was admirably illustrated by some slides of mounted diatoms (donated by Mr. Stodder to the Section), one of which exhibited several rows of perfect beads, just where transverse striæ of two frustules of Pinnularia crossed each other nearly at right angles, thus proving that the beaded appearance, as observed by most of the members present, was merely an optical effect, the result of the passage of light through a transparent refracting medium with curved surfaces. (See p. 519.)

Dr. RICHARDSON remarked that it gave him great pleasure to see so much interest taken in the Section by the corresponding members, especially when this interest was demonstrated by the contributions of such elaborate and instructive papers as that which had just been read.

On motion, the article was referred to a committee composed of Drs. Tyson, Morris, and Richardson.

Dr. J. CHESTON MORRIS exhibited a specimen of Triceratium from Thames mud, which, under the one-inch objective, displayed hexagonal markings with both direct and oblique light, but with a half-inch lens, draw-tube, and high eye-piece, showed, by oblique illumination, small spines on a horizontal plane, demonstrating what Dr. Morris remarked he believed was the true structure of the diatom,—viz., that its surface was studded with minute cones, just as that of Pleurosigma angulatum is with bosses. Dr. Morris observed that this specimen he had on exhibition illustrated his remark at the last meeting, that whilst best results were in general to be obtained by central light, in some cases we

failed to perceive certain characteristics without the aid of oblique illumination. It also showed the advantage of "penetration" or "depthing," because with an objective possessing this quality in a low degree, and focussed for a plane in which lay the apices of the cones, we would see only small dots, although by approximating the lens to the object, larger dots, and on still further depression (so as to bring into view the plane on a level with the bases of the spines), a mosaic of hexagons, would become visible.

Dr. RICHARDSON inquired whether Dr. Morris had any evidence that these supposed hexagonal markings were not really optical illusions, produced by the close juxtaposition of circular dots, as pointed out by M. Nachet and exquisitely illustrated by a figure at the end of Dr. Carpenter's last (fifth) edition of "The Microscope and its Revelations."

Dr. MORRIS replied in the negative, and thought it quite possible that the bases of the spines were circular.

Mr. D. S. HOLMAN explained his method of investigating diatoms, etc., by rolling them over and over in the stream of liquid flowing along the narrow channel connecting the two chambers of his improved "Current Slide" (see *Philadelphia Medical Times*, April 5, 1873). Mr. Holman also showed a current slide carrying a fluid containing minute particles of gamboge in active molecular motion, and remarked that this molecular or Brownian movement, supposed by some to be due to external jarring of the instrument, was by this experiment indicated to be the effect neither of surrounding vibrations, nor of electricity, nor of a difference in temperature of the upper and lower enclosing surfaces of glass, but the result of some *inherent power* of the substance.

Dr. JAMES TYSON observed that he had in his cabinet a specimen of gamboge, mounted in fluid three years ago, which showed this curious Brownian motion in perfection for at least two years, at the end of which time he last examined it. He was at a loss to understand how Mr. Holman's experiment proved that the vibratory or jactatory movement, as it was often called, was not due to external influences, which might cause the tremulous motion of molecules of matter in the current, just as the waves of a river might rock a boat, even whilst it floated rapidly along in a swiftly-flowing part of the stream.

Mr. HOLMAN replied that if we shook or jarred the table on which the microscope stood, we could see that the molecules all moved in one direction, just as they did in the current upon his slide, and yet it was perfectly obvious that, besides their forward movement, these minute particles had an independent motion in cycloidal arcs around one another. Mr. H. added that in some of his specimens the Brownian movement had continued uninterruptedly for four years, and, so far as his investigations had gone, there was no substance incapable of exhibiting it; powdered emery, for example, displaying it very satisfactorily indeed.

SELECTIONS.

No. 55. An Act to Regulate the Practice of Medicine, Surgery, and Obstetrics in the Commonwealth of Pennsylvania.

SECTION 1. *Be it enacted, etc.,* That the standard qualifications of a practitioner of medicine, surgery, and obstetrics, or of any one who may attempt to practise, singly or jointly, medicine, surgery, or obstetrics, shall be and consist of the following—namely, a comprehensive and practical knowledge of human anatomy, human physiology, pathology, chemistry, *materia*

medica, obstetrics, practice of medicine and surgery, and public hygiene, and a good moral character.

SECTION 2. The possession of a diploma, regularly issued by a medical school acting under a charter from this or other State or country, shall constitute the sufficient license for the person to whom such diploma is granted, to practise, singly or jointly, medicine, surgery, or obstetrics, as set forth and empowered in said diploma: *Provided, however,* That a diploma that has been or that may hereafter be granted for a money consideration, or other article of value alone, or that has been or may hereafter be granted to any one who has not pursued the usual course of studies required by a legally chartered medical school, shall not be considered as a sufficient qualification under this act.

SECTION 3. Any practitioner who may not have a diploma, as provided for in section two of this act, and who may not be qualified, as hereinafter provided, shall have the privilege of applying to the prothonotary of the court of common pleas of the judicial district in which such applicant resides, for an examination in the branches of medical science and art set forth in section one of this act; whereupon it shall be the duty of such court to appoint a committee or committees, consisting each of three respectable practitioners of medicine of the school of practice recognized in this commonwealth, to which such applicant or applicants may profess to belong, and shall fix the time and place of holding such examination. Each of said applicants, before being admitted to examination, shall deposit with such committee the sum of fifteen dollars (\$15), which money shall be equally divided among them, for which they shall give a receipt; it shall be the duty of such committee or committees to convene at any time upon the call of an applicant or applicants for examination; it shall be the duty of such committee, when the said applicant is found to be qualified, as set forth in section one of this act, to grant to such applicant a certificate, and said certificate shall be the sufficient license for the person to whom it is granted to open an office in this commonwealth for the practice of medicine, surgery, or obstetrics; it shall further be the duty of such committee to appear before the clerk of such court and take an oath or affirmation that they have not taken and will not receive, directly or indirectly, any other compensation for instituting such examination than that which is herein provided.

SECTION 4. Any person who has attended one full course of lectures in any respectable school of medicine recognized by law, and has been a resident practitioner of medicine, surgery, or obstetrics in this commonwealth five years previous to the passage of this act, is hereby authorized to pursue the same. Any person who has been in the continuous practice of medicine, surgery, or obstetrics for ten years in this commonwealth shall be and is hereby authorized to pursue the same.

SECTION 5. Any person who shall attempt to practise medicine or surgery, by opening a transient office within this commonwealth, or who shall, by handbill or other form of written or printed advertisements, assign such transient office or other place to persons seeking medical or surgical advice or prescription, shall, before being allowed to practise as aforesaid, appear before the clerk of the court of quarter sessions of the county wherein said practitioner shall attempt to practise, and shall furnish satisfactory evidence to such clerk that the provisions of this act have been complied with, and shall, in addition, take out a license for one year, and pay into the county treasury, for the use of such county, the sum of two hundred dollars therefor, whereupon it shall be the duty of such clerk to issue to such applicant a proper certificate of license, on payment of the fee of two dollars for his services: *Provided, however,*

That the announcement of name, title, and place of business by card, or announcement of name, title, and place of business in newspaper or other periodical, shall be sanctioned as legitimate, and is so approved by this act.

SECTION 6. Any person violating the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction shall be sentenced to pay a fine not exceeding five hundred dollars, for the use of the county wherein such misdemeanor is committed, or imprisonment not exceeding one year, or both, at the discretion of the court; any person so convicted shall not be entitled to any fee for services rendered, and if a fee shall have been paid, the patient, or his or her heirs, may recover the same as debts of like amount are now recoverable by law.

APPROVED—The 12th day of April, A.D. 1875.

J. F. HARTRANFT.

GLEANINGS FROM OUR EXCHANGES.

A GENUINE CENTENARIAN.—Sir Duncan Gibb recently made a post-mortem examination on a woman who died at the well-authenticated age of 112 years. Her various organs were in a wonderfully healthy condition, scarcely any changes being observed, excepting that her heart was enlarged slightly, and there was great decrease in fatty tissue. Her death was said to have been caused by a "cold;" but, beyond slight congestion of the lungs, no disease of the respiratory apparatus was made out.

POISONING BY BICHROMATE OF POTASSIUM.—A photographer, in London, recently drank a quantity of a strong solution of bichromate of potassium, having mistaken the jug for another which contained ale. The physician called in found him very prostrate, sweating profusely, and complaining of severe abdominal pains. He was also slightly purged, the evacuations being of a greenish-yellow color. The pupils were dilated, and the pulse very weak and fluttering. Sulphate of zinc in water was administered two or three times, until vomiting and active purgation had been induced. Subsequently, olive-oil was given him. He remained very weak for some time, and the stomach could only tolerate the mildest food.—*British Medical Journal*.

APPLICATION OF COTTON-WOOL TO THE MEATUS AUDITORIUS.—Mr. G. F. Hodgson writes to the *British Medical Journal*, March 27, combating the statement recently made that cotton-wool is injurious to the ears.

It is true that if cotton-wool be pushed far into an ear whose cutaneous lining is already in a congested or irritable condition, it will, most likely, do more harm than good. The value of cotton-wool, however, when properly employed in cases of otorrhœa and perforated or lost membrana tympani, is beyond price. In England there are hundreds of persons who are daily introducing and wearing these little pledgets of cotton-wool pushed home against the remnants of their "drums," not only without the slightest inconvenience but with immense benefit. As a rule, these dossils are not introduced dry, but saturated with plain water, glycerin, oil, or other fluid, according to circumstances; and it is a good plan to remoisten them if they have been in any time.

COPPER IN THE LIVER.—M. Bourneville contributes (*Le Progrès Médical*, No. 32, 1874, *et seq.*) an account of certain observations made at the Salpêtrière concerning epilepsy. In one patient who had been treated by ammoniacal sulphate of copper, careful examination of the liver was made after death, with a view to ascertaining whether this salt is absorbed by the organ in question. From the analysis made, it would appear that

when ammoniacal sulphate of copper has been used in medicinal doses for some time, it may become stored away in the liver in considerable quantities. It follows from this that in medico-legal cases much reason should be exercised in drawing inferences from the presence of copper in the liver.

EXCESSIVE HEMORRHAGE FROM EXCISION OF THE TONSIL CONTROLLED BY ICE-PACKING OF THE THROAT.—Dr. Fauntleroy, of Staunton, Va., reports the following case in the *American Medical Weekly* for April 10. Having removed a very much enlarged tonsil by the usual process of excision with the tonsillotome, after fifteen or twenty minutes the wound commenced to bleed profusely. Solution of Monsel's salt and gargling with iced solution of common salt failed to check the hemorrhage, and Dr. F. finally had recourse to the ice-pack, applied behind the angle of the jaw and along the line of the cervical blood-vessels. This application was continued for more than an hour, the hemorrhage decreasing gradually during that time, and finally ceasing entirely.

INFLUENCE OF MATERNAL IMPRESSIONS ON THE FÆTUS.—F. Ormrod writes to the *Lancet*, March 13, an account of a woman who had her right hand trapped by the slamming of a door during the early period of utero-gestation. She was delivered in due time of a female child, normal in every respect excepting the fingers of the right hand, which were arrested in development. At the present time the child is over two years of age. The thumb and palm of the hand are quite natural; but the fingers measure only about half an inch in length, and are apparently without bones.

ACUTE GLOSSITIS IN SCARLATINA.—An instance of this extremely rare complication has lately been published by Dr. William Moore, of Dublin. It occurred in a young gentleman aged 18, and was the only example Dr. Moore had ever seen in this disease. He strongly advocates the treatment by iron and stimulants, when this complication takes place. A somewhat similar case has been described as occurring in the practice of Dr. Banks, but the complication is unusual.

TRICHINA.—Dr. Van Petri, of Rostock, has examined all the swine slaughtered in that town during the year 1874, for the purpose of ascertaining how many of these animals were infested by trichinæ. Out of 6731 thus examined, only two proved to contain these parasites.—*Virchow's Archiv*, February 15.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 4, 1875, TO MAY 10, 1875, INCLUSIVE.

KEENEY, C. C., SURGEON.—During the absence of the Medical Director of the Department, to perform his duties. S. O. 40, Department of California, April 29, 1875.

BAILY, J. C., SURGEON.—Assigned to duty at the Post of Columbia, S. C. S. O. 59, Department of the South, May 6, 1875.

FRANTZ, J. H., SURGEON.—Relieved from duty at Columbia, S. C., and to comply with S. O. 73, c. s., A. G. O. S. O. 59, c. s., Department of the South.

GIBSON, J. R., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon De Witt, to comply with S. O. 73, c. s., A. G. O.

DE WITT, C., ASSISTANT-SURGEON.—Assigned to duty at Charleston, S. C. S. O. 59, c. s., Department of the South.

WEISEL, D., ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 56, Department of the South, May 1, 1875.

FINLEY, J. A., ASSISTANT-SURGEON.—Assigned to duty at the Cantonment on the North Fork of Red River, Texas. S. O. 67, Department of the Missouri, May 5, 1875.

DE LOFFRE, A. A., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Finlay, assigned to duty at Fort Larned, Kansas. S. O. 67, c. s., Department of the Missouri.

MAUS, L. M., ASSISTANT-SURGEON.—Assigned to duty at Frankfort, Kentucky. S. O. 59, c. s., Department of the South.

PHILADELPHIA MEDICAL TIMES.

SATURDAY, MAY 22, 1875.

ADDRESS.

A LOST ART OF MEDICINE.

An Address delivered before the American Medical Association

BY S. D. GROSS, M.D.

WE here reproduce in full, with the exception of some preliminary opening matter, the address of Prof. Gross before the American Medical Association. After contrasting the present disuse of venesection with the universal employment of it in his boyhood, and asserting that bleeding is emphatically one of the lost arts, the venerable Professor continued as follows:

How this extraordinary change in sentiment and practice was brought about, by what influence, agency, authority, philosophy, logic, or mode of reasoning, is a matter worthy of brief inquiry. The causes, so far as they are patent to my mind, are mainly four: First, the influence or tyranny of authority, soon passing into more or less extensive fashion; secondly, the indiscriminate employment of the lancet in the days of what has been termed, not inappropriately, the Sangrado practice; thirdly, a more accurate knowledge of the nature and seat of diseases; and, lastly, the use of certain remedies unknown a third of a century ago, but now of general, if not universal, resort, in the treatment of inflammatory affections.

1. The influence of authority annually slays millions of human beings. Its pernicious effects upon human life, in its individual and collective relations, are felt in every direction; in the construction of our dwellings, in our habits and occupations, in our dress, in our social entertainments, in our amusements, in our food and drink, and in a thousand other ways. Of its malign influence in our profession examples daily fall under our observation, as the result of pernicious doctrines and practices. Superstition and fanaticism have kept the world in a state of intellectual bondage from the earliest records of society down to the present moment. The spiritualism of the present day has its counterpart in the witchcraft of three centuries ago, fortunately without the hangman's halter. Every age has its peculiar absurdities, characteristic of the minds of some of its people. Mesmerism deluded thousands of persons. The metallic tractors of Perkins enjoyed for a time a world-wide notoriety. Homœopathy is still at work in deluding the world. Clairvoyance has many devout adherents. Berkeley, in the middle of the last century, effected many wonderful cures with the aid of his tar-water. For upwards of one hundred years the lancet enjoyed unlimited sway. Everybody was bled. Surgeons, during the last dozen years, have had carbolic acid on the brain as a dressing in wounds and other injuries. Broussais, Cookeism, and the blue pill of Abernethy, each had a reign of at least a quarter of a century. For an equally long period the medical mind of Italy was agitated by the tartar-emetic treatment of Rasori and his followers. Thompsonianism, or the lobelia and cayenne-pepper treatment, is not yet entirely extinct on this continent, although its days were numbered long ago. For nearly a third of a century the doctrine of a change of type in disease has tyrannized over the minds of medical men, and exerted a controlling influence upon their practice. Of all these delusions, the latter, often called Toddism, after Dr. Todd, its author, has exercised the most pervasive and baneful effects upon civilized society. Ensconcing itself

behind a false position, it has literally enslaved the medical world, entrapping alike the wise and the foolish, and sweeping over human life with a force equal to that of the fiercest and most destructive hurricane. Unlike the doctrine of sthenic and asthenic diseases of Dr. John Brown, who in the latter part of the last century enjoyed such a wide celebrity as a medical reformer, it assumes that all maladies are of a low type, imperatively demanding the use of stimulants for their successful management. It countenances no half-way measures. The patient must be upheld by stimulants or he must die. Now and then, perhaps, a few leeches may be tolerated, but only in very exceptional cases, where there is not too much depression of the vital powers. Who and what Dr. Todd, the author of this system of medicine, was, it would be needless to inquire. Everybody knows that he was one of the ablest writers and clinical teachers whom this century has produced; but that he was a profound thinker, I doubt; and it is well to bear in mind that the class of patients at King's College Hospital, London, of which he had charge, were persons in the lower walks of life, broken down by overwork, privation, and various forms of intemperance, and therefore unable to bear depletory remedies. Such patients as Dr. Todd had are to be found in the wards of every eleemosynary institution in Europe and in this country. It was from a study of this class of cases that this famous man, in an evil hour, deduced the absurd doctrine of a change of type in disease. I say absurd, for if there ever was anything absurd this doctrine most assuredly deserves that name. Who, that has any knowledge of the human constitution as it is daily met with in our intercourse with our fellow-citizens, in the various pursuits of life, will lend credence to such an idea,—I had almost said to such a slander? I assert, without the fear of successful contradiction, that man's power of endurance in health and disease is not one particle less than it was fifty years ago, when depletory measures of every form were the order of the day; when, in fact, it would have been deemed derogatory to a physician's character to let a patient die without the aid of such remedies. The exploits performed during our late terrible war alone are sufficient to settle this question. Never, since man battled with man for national supremacy, were there so many rapid, laborious, and brilliant marches executed in so short a time as there were on both sides of the line. The exploits of the soldiers of Alexander, Hannibal, Cæsar, and Bonaparte fade into comparative insignificance by the side of those of some of our generals. Our laborers, farmers, miners, hewers of wood, carriers of water, mechanics, artisans, and professional men, evince no evidence of decline in muscular power or mental endurance. Our sailors are as hardy a race of men as they were in the days of Sir Francis Drake or Captain Cook.

If we look at the habits and modes of life of the people of the present day, it will be found, if I do not greatly err, that they do not differ, in any essential manner, from those of a third of a century ago. The different classes of men and women, in city and in country, live very much as they did in my boyhood, using the same kind of food and drink, pursuing similar occupations and amusements, and exercising as much control over their appetites and passions generally as their fathers and mothers. If there are any differences in any of these particulars, they are certainly not well marked, nor so radical in their character as to diminish, in any material degree, the power of endurance of our people in health and disease. On the other hand, owing to the more extensive cultivation of our soil, the destruction of our forests, the draining of our

marshes, and the greater attention paid to the study of hygiene, our people, especially those in the rural districts, are much more exempt from the diseases caused by the noxious exhalations from the earth's surface, so prevalent in newly-settled countries, and so pernicious in their effects upon the constitution, than they were in the early days of my white- and bald-headed contemporaries.

Do not men during accidents and surgical operations, and women during parturition, often lose enormous quantities of blood, and yet frequently make excellent recoveries? In epistaxis, hæmoptysis, and hæmatemesis, this fluid is often largely poured out, and yet it is seldom that we hear of a person dying from the effects of its loss.

In the face of such facts as these, and a hundred others that might be adduced if time permitted, the doctrine of a change of type in disease must fall to the ground as utterly untenable.

The influence of fashion is not limited to our profession. We all recollect how the crinoline of the French Empress, invented to conceal a condition of which most ladies are so proud, enslaved the female mind, until every woman, married and single, considered it as an indispensable article of dress. A sofa, however spacious, was hardly long enough for a woman thus arrayed to sit upon. How the fashion has changed within the last six or eight years is familiar to everybody. Now the dress is so narrow as to show the outline of the person, and compel the greatest care in progressing lest the fair wearer should trip and tear her garments. Even diseases occasionally become fashionable. When it became known that Louis XIV. was laboring under anal fistula, the disgusting malady became at once the fashionable ailment of his debauched court. The use of enemata was cultivated as one of the fine arts in France in the time of Molière, who lashed the faculty without mercy for its follies and extravagances.

Second.—The indiscriminate employment of the lancet in former days did much to bring blood-letting into discredit, not only with the better thinking class of physicians, but the public at large. "We cure the sick," says Gui Patin, a professor in the Royal College of France, "when over eighty years old, by blood-letting, and also infants of not more than two or three months, with as much success and as little inconvenience." Rush, the great champion of this operation on this side of the Atlantic, bled indiscriminately and remorselessly at all periods of life, the young, the middle-aged, and the old; in all kinds of diseases, in the eruptive fevers, in fever and ague, in puerperal fever, in inflammations, in injuries, in hemorrhages, and even in anæmia, often taking immense quantities of blood, and repeating the operation six, eight, or even a dozen times in the same patient. In short, he and his followers used to bleed in every possible disorder until, in many cases, no more blood would flow, because there was none left. That such a practice would at length work out its own destruction is what might reasonably have been expected. It rang its own knell.

Third.—That we are much better acquainted with the nature and treatment of disease than our fathers were is a fact so universally accepted as to require no argument in its support. Our progress in this respect, during the last forty years, has simply been marvellous; and to nothing are we so much indebted for these improvements as to the study of pathological anatomy and histology, and the astounding developments of chemical science.

Fourth.—That the treatment of disease has been greatly simplified within the period above specified is familiar to every member of the profession. Homœopathy, by the absurdities of its doctrines and primi-

tive practices, long ago demonstrated to the world that most of its cures are effected spontaneously, through nature's restorative powers alone, while the patient's mind is medicated with the decillionth part of a drop or a grain of medicine; and in comparatively recent years two eminent medical philosophers, Professor Bigelow, of Boston, and Sir John Forbes, of London, showed us, by a series of admirably-conducted observations, that certain diseases, as smallpox, scarlatina, measles, typhus and typhoid fevers, are self-limited in character, and therefore not to be materially if at all abridged in their course by any plan or means of medication whatever. A third of a century ago the only so-called depressants, aside from the use of the lancet, were tartar emetic, calomel, and digitalis, the latter of doubtful efficacy in any case, and the first often exhibited without due discrimination. Of aconite and veratrum viride, now so universally employed as antiphlogistic agents, we were totally ignorant. These two medicines, as I shall endeavor to prove by-and-by, although frequently of immense service in the treatment of inflammatory affections, are far, far inferior to blood-letting.

Believing that these are the principal, if not the only, reasons which have led to the abandonment of blood-letting as a therapeutic agent, I propose now to speak of the operation itself, and to point out, first, the classes of diseases to which it is more especially applicable; secondly, the period at which it should be performed to yield the greatest amount of good; and, lastly, its mode of action.

Blood may be abstracted in different ways, as, first, by venesection; secondly, by leeches and cups; thirdly, by incision, scarification, or puncture; and fourthly, by arteriotomy. The latter operation is so difficult of performance that few practitioners are willing to attempt it. There are cases, as in violent inflammation of the brain, eye, and ear, in which it is supposed to exercise a peculiarly beneficial influence; but, generally speaking, it is quite certain that venesection, if properly executed, answers every purpose, even in the affections here specified. Similar remarks are applicable to bleeding at the jugular vein, also usually a difficult and, sometimes, even a dangerous operation.

The diseases to which blood-letting is more particularly applicable are the different inflammations, acute and chronic; general bleeding being best adapted to the former, and local to the latter. Hippocrates and his immediate followers bled largely in pneumonia and pleurisy, and Sydenham, Rush, Louis, Drake, and many others often took immense quantities of blood in the treatment of these maladies. In acute inflammation of the eye, in robust subjects, bleeding is often indispensably necessary to save the affected organ. Who would hesitate to draw blood largely, under similar circumstances, in acute inflammation of the brain and its envelope, in acute pericarditis or endocarditis, in hepatitis, splenitis, gastritis, enteritis, peritonitis, cystitis, metritis, or orchitis? Stricture of the urethra would be much less frequent if young men laboring under severe gonorrhœa were freely bled at the beginning of the attack. In traumatic affections of the joints, unattended with loss of blood or severe shock, the abstraction of blood would often prevent ankylosis, so common under the present system of treatment. The spasm which is so often present in recent fractures, especially in those of the leg and thigh, is more readily controlled by venesection, followed by a hypodermic injection of morphia, than by any other agent I have ever tried.

In chronic inflammation, blood-letting is often an indispensable remedy. Even the most ultra advocate of the stimulant method of treatment will hesitate to employ it when destructive action is gradually but surely undermining structure and function. The abstraction of five, eight, or even ten ounces of blood in chronic

pneumonia and pleurisy, especially when associated with severe pain and obstructed respiration, often acts like a charm, relieving suffering and promoting the beneficial action of other measures. In chronic ophthalmia a few leeches applied to the fore part of the temple, on a line with the commissure of the lids, frequently produce the happiest result. But I will not consume your time by an enumeration of the different cases of chronic inflammation in which blood-letting might be advantageous. What I have said respecting the lungs, pleuræ, and eye is equally applicable to other structures, and needs no further elucidation here.

It requires no labored argument to show that general bleeding can be successfully practised only at the beginning of an acute disease, or during its earlier and gravescent stages. Performed at a later period, when the morbid action is fully established and the affected tissues are inundated with inflammatory deposits, it cannot fail to do harm by robbing the system of the strength so much needed to carry on its vital processes. A copious bleeding at the outset of a violent inflammatory disease is gold; but at its height, lead; or, to express myself more clearly, life in the one case, death in the other.

Secondly.—To draw blood to the greatest possible advantage, the quantity should be measured, not by ounces, but by the impression it makes upon the system, as denoted by the pallor of the countenance, the reduction of the heart's action, the softened state of the pulse and skin, the abatement of pain and of other symptoms, as headache, thirst, and restlessness, so universally present in all severe inflammatory attacks. To insure this result in the most speedy and decided manner, the blood should be drawn from a large orifice in a large vein at the rate of two and a half to three ounces in the minute, while the patient is in the erect or semi-erect posture. If the body be recumbent during the operation, a much larger quantity of blood will be required to be drawn to produce the desired effect than when the reverse is the case. While, therefore, the bleeding should be spoliative, care should be taken not to waste the fluid unnecessarily.

To prevent undue reaction after the operation, the bleeding should not be carried to complete syncope, but merely to an approach to this condition, the effect of the operation being carefully watched by a reference to the countenance and the pulse, lest it should exceed the proper limits, and thus do harm instead of good. Violent reaction, however, in any case, after the abstraction of blood, may generally be effectually prevented by a full dose of some diaphoretic anodyne, as ten grains of Dover's powder with one-fourth of a grain of morphia, given immediately after the operation.

Respecting the repetition of the operation, every case must, so to speak, make its own rules. If, after a very copious bleeding, the symptoms rapidly reappear in all or nearly all their former intensity, the operation should at once be repeated, either by reopening the original orifice or by selecting another vein. In urgent cases, as in violent pneumonia, pleurisy, peritonitis, cerebritis, or endocarditis, the operation may often be repeated several times in rapid succession. Under such circumstances, the practitioner must, like a wary general, make forced marches, and follow up his successes, not waiting until the enemy has intrenched himself behind his works, but striking heavy blows while he has the opportunity.

But I shall be told that such heroic treatment must inevitably induce serious debility. I grant it will; but in turn I ask, will the disease, if neglected or permitted to progress, not also cause debility,—debility, perhaps, of the very worst kind,—debility from over-action of the heart, imperfect supply of nerve-fluid, deranged circulation, impaired function of vital organs, and, above all, from disordered structure from inflammatory deposits?

The enlightened practitioner bleeds to save tissue, and to prevent the morbid action from running riot. He repairs strength, when the time for it arrives, by making blood with nutritious food and drink, and thus speedily sets the machinery of life again in motion. The timid, hesitating practitioner, the opponent of bleeding, on the contrary, although he may employ the same restoratives, uses them inopportunistically, and thus allows the debility caused by his treatment to linger for an indefinite time, provided the patient is so fortunate as to survive the first onslaught of his disease.

Before I proceed to speak of local bleeding, let us briefly inquire into the mode of action of venesection, or, in other words, how the removal of blood from the system affords relief in inflammatory affections. This question can be easily answered. In the first place, the abstraction acts spoliatively, diminishing, as the name implies, the quantity of blood, both in the part and system. Secondly, it weakens the power of the heart, and thereby prevents it from sending the blood with the same force and velocity into the suffering structures. Thirdly, it unlocks all the emunctories, and thus promotes secretion. Fourthly, it disorges the vessels at the seat of the disease, restores the circulation, and places the absorbent vessels in a better condition for the removal of effused matter. And, last, but not least, it favors the action of other remedies, as purgatives, diaphoretics, diuretics, and anodynes.

But it will be said that all these effects may and can readily be induced by the agency of other remedies, as aconite, veratrum viride, digitalis, mercury, and tartar emetic, and that, too, at much less cost to the system. That these articles are powerful depressants, lowering the heart's action and promoting secretion, no one at all acquainted with their virtues will question; but I deny that they exercise the same beneficial impression upon the vessels at the seat of the inflammation. When blood is drawn freely from a large vein at the bend of the arm, from a large orifice, to an approach to syncope, the vessels at the seat of the morbid action are unloaded, often to such an extent that the affected structures do not exhibit any marked difference in color from those in their immediate vicinity. Thus, for example, in violent conjunctivitis the mucous membrane, the seat of the disease, always, under such circumstances, presents a perfectly blanched appearance, however red and engorged it may have been the moment before. Now, what occurs in the eye, in such a case, may reasonably be supposed to take place in any other part of the body when a patient is bled to a similar extent. In pleurisy, one of the immediate effects of the copious abstraction of blood is a mitigation of the torturing pain which forms so prominent a symptom in this disease, due, evidently, to the diminished calibre of the vessels in the pleura, previously in a state of complete repletion. Has any one ever witnessed such an effect from the exhibition of aconite, digitalis, veratrum viride, or tartar emetic? Never. No matter how these articles may be administered, whether singly or variously combined, they are simply depressants, not depressants and evacuants, as the abstraction of blood from a vein or an artery; there is no blanching of tissue from their use, no unloading of distended and crippled vessels,—indeed, no direct appreciable effect of any kind.

The more recent researches in pathological histology furnish a hint not easily to be mistaken as to the most salient treatment of inflammation in its earlier stages. The leading indication is to restore the paralyzed capillaries to their normal tonicity, so as to prevent structural changes in their walls, and facilitate the outward passage of the white globules with which they are choked. It is now well known that in every inflamed area there is marked hyperæmic distention of the blood-vessels, which are often crowded to their utmost capacity

with leucocytes, which emigrate through the vascular walls, and, in conjunction with the effused blood-liquor, constitute the most important elements in inflammatory deposits. Hence the object of treatment should be to restore the capillaries to their normal calibre through the artificial induction of contraction of their walls,—an effect which can be brought about, as is daily witnessed in many of the external inflammations, by cold applications, which, as is well ascertained, produce reflex contraction of the vessels. In inflammation of the more deeply-seated organs and tissues, however, this object can only be attained by spoliative bleeding, whereby the affected capillaries are relieved of their contents. In this way only can their tonicity be restored, the further effusion or migration of cell-elements restrained, and the absorption of existing deposits favored.

Another effect of bleeding, not to be overlooked in this discussion, is the diminution which it causes in the quantity of fibrine and white globules, so remarkably augmented in inflammatory affections. This change, of which I have witnessed many examples, was beautifully illustrated in the case of a young man, nineteen years of age, whom I attended along with the late Dr. Charles Woodward, of Cincinnati, on account of a severe attack of pleurisy. Blood was drawn on three consecutive days, the first bleeding being performed about thirty-six hours from the commencement of the attack. The fluid, amounting to nearly a quart, was not only greatly buffed, but cupped on both sides of the crassamentum, as is shown in the specimen which is still in my possession. At the second operation the fluid was buffed, but not cupped; and at the third it was merely a little sized, all pain and active inflammation having by this time disappeared. If such effects follow the use of the articles above mentioned, I am uninformed of the fact.

In leeching and cupping, blood may be taken directly from the affected structures, or indirectly, as when they are practised at a distance from the seat of the inflammation; in the latter case the effect, if carried to a great extent, is similar to that produced in venesection, but generally much more tardy, and, therefore, in the main, not so efficacious. When the tissues are divided, as in incisions, scarification, or puncture, the vessels are directly drained of their contents, an operation often followed by great, if not permanent, relief. Illustrations of the efficacy of this mode of depletion are daily witnessed in tonsillitis, in erysipelas, ulcers of the extremities, inflammation of the uterus, and in impending mortification, not to mention other affections.

I have said that general bleeding can be successfully practised only at the beginning of an inflammatory attack, a fact which, I repeat it, is not to be lost sight of in weighing the propriety of such a procedure. Let it be borne in mind also that bleeding is not to be practised indiscriminately, but judiciously, and with proper regard to the condition of the system. Our fathers grievously erred, because they bled in every stage of disease, and in all states of the system, the plethoric and the anæmic, the strong and the weak. Of course there were exceptions, but as a rule this was the practice; the harm, hence, as a natural consequence of the abuse, the abandonment of the treatment. It is within the recollection of all the older members of this Association when the practice of medicine in this country and in Great Britain was limited to the lancet, calomel, digitalis, opiates, and tartar emetic, with gruel and chicken-broth as the chief diet during sickness. I well remember the time when the use of cold water was interdicted as highly improper, especially in the treatment of the so-called eruptive fevers, and when ventilation of a sick man's chamber was considered as fraught with danger. Bleeding will again come into fashion; history constantly repeats itself, and knowledge runs in a circle.

No sensible man can fail to read the signs of the times; but it will not be indiscriminate bleeding, but bleeding performed for a reason, early, and, if need be, freely, to save tissue and promote resolution; in the robust and plethoric, in the young and middle-aged, not in the weak, the anæmic, the intemperate, the broken-down, and the decrepit. Practitioners during the last third of a century have labored under a delusion and a dream, from which they are gradually emerging to a sense of their duty; and, although I am not a prophet or the son of a prophet, I venture to predict that the day is near at hand, if indeed it has not already arrived, when this important element of treatment, so long and so shamefully neglected, will again become a recognized therapeutic agent, and will thus be instrumental in saving many lives, many an eye, many a lung, many a joint, and many a limb.

But bleeding should not be restricted to the treatment of inflammatory diseases. There are other affections in which it may often be practised with the greatest benefit. In puerperal convulsions, attended with a plethoric condition of the system, copious venesection, promptly followed by the administration of a full anodyne, either alone or in union with chloral and bromide of ammonium, and the application of leeches to the temples and cold to the head, is the sheet-anchor of our hopes, a positive *sine qua non* to success. An experienced and learned member of this Association, Dr. J. Fordyce Barker, recently called attention to this subject in a paper characterized by strong sense and great practical acumen, worthy of his high position as an accomplished gynecologist. I believe, indeed, that the practice thus set down is the one now generally, if not universally, adopted in the treatment of this dangerous disease, as it was in the time of Dewees and his more enlightened contemporaries. In certain forms of apoplexy the judicious employment of the lancet cannot be too strongly insisted upon, especially in comparatively young and vigorous subjects. Blood in this disease is often taken with leeches when it ought to be taken with the lancet. In asthma, bleeding is frequently of inestimable value, in relieving engorgement and spasm of the lungs, the causes of the terrible dyspnoea so often present in the more aggravated forms of the disease. I recall to mind the case of a lady who was the subject of asthma from the age of fourteen up to that of eighty-six, when she died of pneumonia, whom I repeatedly bled with the greatest advantage in attacks of this kind, which nothing else could relieve. In another case, that of a tall, slender gentleman of this city, nearly eighty years of age, in which a severe attack of asthma was complicated with great congestion and slight inflammation of the lungs, the abstraction of less than ten ounces of blood by the lancet led to a speedy convalescence and a complete cure. I verily believe that if this gentleman had not been bled he would have died. In certain forms of phthisis, venesection, judiciously employed, is frequently productive of great benefit. I allude more particularly to the chronic variety of the disease, kept for years in abeyance by great care and a properly regulated regimen. I remember the case of the late Mr. Benjamin Drake, of Cincinnati, a brother of the great professor, who labored for many years under disease of the lungs, associated with tubercular deposits, the more urgent symptoms of which were always promptly relieved by the loss of eight to sixteen ounces of blood by venesection. I have always felt satisfied that his life was materially prolonged by this treatment. Dr. Rush was in the habit, as Sydenham had been before him, of bleeding in every case of phthisis attended with a hard pulse, or a pulse rendered weak by the laborious transmission of blood through the lungs. In one of his cases he bled eighteen times in two weeks, and in another, fifteen times in six weeks, with the happiest

effect. I do not cite these instances as examples for our imitation, but simply to show that a system borne down by disease may react favorably under what to us of the present day appears as a most heroic measure.

Forty years ago it was customary in protracted labor, dependent upon rigidity of the uterus and the perineum, to bleed in order to relax the parts and expedite the expulsion of the child. Dewees, in such cases, often took large quantities of blood, especially in young, robust, primiparous women, and occasionally even repeated the bleeding. I well remember that this was the general practice for a number of years after I entered the profession. Why it has fallen into desuetude it would be difficult to tell. The abstraction of blood under such circumstances was always followed by the exhibition of a large anodyne, under the influence of which the labor usually progressed rapidly to a favorable issue, without subjecting the poor woman to undue torture, the danger of lacerating the perineum, or the necessity of applying the forceps, the use of which is now so common among all classes of accoucheurs.

The plethoric condition of the system so frequently met with in young, robust, pregnant women is generally promptly relieved by the abstraction of twelve to fifteen ounces of blood, and certainly there is no more rational remedy in such circumstances, especially when the redundancy of blood is accompanied by dizziness, vertigo, or headache. Thirty years ago there were few women that were not bled once or twice during uterogestation on account of the symptoms, and I do not know that I ever heard of one that was injured by the practice.

Certain forms of hysteria and epileptic convulsions, dependent upon congestion of the nervous centres and a redundancy of blood in the system, are generally materially benefited by venesection. The relief in the former affection is often prompt and permanent, as I can testify from personal experience.

In the convulsions of infants blood-letting is frequently of signal service. In that form of the disease which follows upon the more severe attacks of cholera, so rife in our hot summer months, and which are manifestly due to over-excitement of the brain, as is shown by the excessive heat of the head, the flushed condition of the countenance, the suffused eye, the intense thirst, the incessant restlessness, the intolerance of light and noise, and the twitching of the muscles, the abstraction of two to two ounces and a half of blood from the arm, in a child from one to two years of age, not only, in many cases, promptly arrests the vomiting and other distressing symptoms, but protects the brain from more serious mischief, and thus places the system in a condition for speedy convalescence.

In what is called hay-fever, a good bleeding sometimes affords immediate alleviation of all the disagreeable suffering incident to that complaint, as dyspnoea, violent sneezing, nasal catarrh, tightness in the frontal sinuses, headache, and horripilations, or chilly sensations along the course of the spine. I recollect one case which came under my observation many years ago, in a clerical gentleman, thirty-three years of age, who, on being largely bled one Sunday soon after the close of his religious services, was completely cured for that season; and, although the malady recurred during several consecutive summers afterwards, the attacks were always comparatively light.

Cases have been related of great benefit afforded by bleeding in uræmic coma, attended with unconsciousness, dilated and fixed pupils, convulsions, a highly albuminous condition of the urine, and excessive prostration of the system. The blood at first issued feebly, but gradually the stream increased in volume, the blood assumed a brighter hue, the pulse rose, the convulsions ceased, consciousness returned, and the patient finally

made an excellent recovery. Several such examples will be found recorded in the *London Medical Times and Gazette* for September, 1874, by Dr. Benjamin W. Richardson, in an article on "Blood-letting as a Point of Scientific Practice," and are worthy of special study.

This spring twelve months ago I was requested to visit a lady, a stout, muscular person, in robust health, upwards of forty years of age, who for several years past had suffered much from attacks of headache, attended with dizziness, and occasionally, also, with vertigo. She had tried various remedies without benefit. I suggested bleeding, to which she at once assented, and I drew fully three half-pints of blood, with immediate and permanent relief.

Surgeons the world over draw blood after severe reaction in concussion of the brain, to prevent inflammation of that organ and of its membranes. The more plethoric the patient the greater the necessity for such interference; but the operation should by no means be restricted to this condition, as it is often of great value, if timeously performed, in the comparatively anæmic subjects. It was a case of concussion of the brain that gave rise to the never-to-be-forgotten conversation between John Hunter and his pupil, Dr. Physick, at the time resident physician at St. George's Hospital, London. A man laboring under concussion of the brain from a fall from a scaffold was brought into the surgical ward in a state of utter unconsciousness. "What shall I do?" said the pupil to his master. "Shall I bleed him?" "Bleed him? Bleed him, sir? No, sir! You would kill him outright. Wait, sir, until he reacts, and then bleed him,—bleed him to death, sir." [Dr. Charles D. Meigs, in *Pennsylvania Hospital Reports*, vol. i. p. 27, 1868.] In compression of the brain from fracture, with depression of bone and compression from extravasation of blood, the abstraction of blood by the lancet and leeches is frequently resorted to for the purpose of securing cerebral accommodation, and the practice, as is well known, is often followed by the most gratifying results.

We all have, at some period or other of our lives, experienced the torturing, racking pains in the back and limbs, so common in bilious, remittent, and intermittent fevers, as if the body was about to be broken in two, causing us to turn and toss about almost incessantly in search of ease; the head generally at the same time terribly distressed, the skin hot and dry, the thirst intense, and the heart in wild, tumultuous motion. Who that has ever been freely bled in such a condition of the system does not remember with grateful feelings the prompt alleviation afforded by the operation? The application of a dozen wet cups to the aching back has often speedily transported the poor patient, as it were, from torment into elysium. In gout and rheumatism the abstraction of blood is frequently of immense benefit, if not as a direct curative agent, as a means of relieving pain and paving the way for the more successful action of other remedies. The passage of renal and biliary calculi is often greatly expedited, and the suffering caused by it much alleviated by a copious bleeding, especially in stout, plethoric subjects.

But I must stop, for my remarks have already been extended far beyond my original design, which was simply to point out a few of the more prominent diseases in which, in my humble opinion, this much-neglected but most valuable therapeutic agent may be advantageously employed.

The fate of blood-letting, Mr. Chairman, teaches us an important lesson, not at all calculated to elevate our pride as men intrusted with the preservation of the health and lives of our fellow-beings. It shows what little faith there is to be placed in human judgment, and how sadly we are influenced by authority and fashion in a matter pertaining to the dearest interests of society.

If I wished to be satirical, I should say that there are in our profession, as there are, indeed, in every other, two distinct classes of men,—the thinking and the non-thinking. The former, whose number is exceedingly limited, accept every novelty, or great and sudden change, with suspicion, wisely concluding that the one ought not to be adopted until it has been fairly tested by well-conducted observation and experiment, and that the other should not be rejected without sufficient cause. The non-thinking man, on the contrary, eagerly lays hold of every novelty, and seldom stops to seek a reason for his new faith. He adopts it simply because his neighbor adopts it. Especially is this the case when the novelty, whatever it may be, has a distinguished parentage, as when it has received the sanction of a great name, or, perchance, if it had a transatlantic origin. Jones, Robinson, or Brown, in Europe, is always a great man, far greater than his namesake on this side of the water. This non-thinking man confounds progress with improvement. He does not weigh the pros and cons of a question; he takes a shorter route; sees things in a distorted light; assumes for granted what he cannot comprehend, and jumps at conclusions. As the sheep follows the wether, so he follows his master, looks through his spectacles, believes in his infallibility, and swears by his authority. The more the assertion borders on the marvellous, the more greedily does he gulp it, so much easier is it to assume the truth of a proposition or statement than to prove it by sound logical argument and inductive reasoning. I think I am not guilty of exaggeration in what I say. It really seems to me as if we were bereft of our senses. No sooner is a new remedy, an operation, or a method of treatment introduced to notice, than it is puffed into gigantic proportions and endowed with virtues as foreign to it as any other folly under heaven. Certain it is, there never was any greater need for deliberation and reflection than there is at the present time; greater need of asking ourselves, "Watchman, what of the night?"

ORIGINAL COMMUNICATIONS.

CARIES OF MASTOID CELLS—REMOVAL OF SEQUESTRUM—FACIAL PARALYSIS AND RECOVERY.

BY CHARLES HENRY BURNETT, M.D.,

Aural Surgeon to the Presbyterian Hospital in Philadelphia.

THIS case came under my care last August (1874), through the kindness of my friend Dr. A. Douglass Hall.

The patient, a lad of 14 years, stated that he had had a neglected aural disease ever since childhood. Some weeks previously he had been attacked by severe pain in the left ear, after bathing in the sea, at Cape May, where he was employed. He then came to Philadelphia to obtain relief from the terrific pain in the ear, and applied to Dr. Hall, who made a deep incision over the mastoid process, giving vent to a large amount of exceedingly offensive pus, and relieving the suffering of the patient greatly. The next day Dr. Hall sent the boy to me. I found the lad very weak, with a pulse over 100, forehead bathed with clammy perspiration, anorexia, less pain since the mastoid incision, with considerable vertigo, and offensive purulent discharge from the ear and the incision over the mastoid process. I found that a probe entered the mastoid process

point-blank, three-fourths of an inch, coming in contact with dead bone. There was also a sinus running from the external auditory meatus, upwards and backwards, to dead bone in the mastoid cavity. The patient stated that about a year previous to this time a piece of dead bone had worked its way from the auditory meatus, after an attack of pain in the ear. A probe passed through the sinus in the auditory canal, and another passed through the sinus behind the auricle, could be made to touch each other in the mastoid cavity, and dead bone was felt everywhere in their path. The silver probe passing into the sinus running from the auditory meatus became instantly blackened, and from this sinus crumbs of black and offensive bone were constantly discharged for several days. At the point in the auditory meatus where the probe entered there was a large bunch of granulations, which was finally removed by a wire-snare. I could not detect any sequestrum at that time. I placed the boy in the Presbyterian Hospital, and gave him milk-punch and tincture of chloride of iron thrice daily for several weeks, during which period the pain became very much less in the ear; that which he still experienced was above, and running forward from the auricle. The vertigo disappeared, and the patient was able to take muscular exercise; the ear became less tender, and permitted all necessary manipulation, but the patient could not lie on the ear on a bed. Under this treatment the discharge grew less, and on the 24th of September I extracted, through the opening in the mastoid process, a spongy sequestrum one-half inch square, and then, placing the broad, blunt nozzle of a syringe in the opening, I gently injected a stream of warm water, which washed out a copious amount of large cheesy-looking masses through the external auditory meatus, and some portions of the mass, passing through the Eustachian tube, escaped by the mouth. The masses were composed of large acicular crystals of cholesterine and fatty epithelial debris, and strongly reminded one of the matter found in cholesteatoma of the ear, as described by Lucae, of Berlin (*Archiv für Ohrenheilk.*, Bd. i. No. 1). The removal of the sequestrum and the subsequent syringing, with its fruitful results, gave still further relief to the patient; all pain disappeared, and he could now lie with his ear downward in bed.

The sinus behind the auricle closed in four days after the removal of the sequestrum, and in a week from that time the discharge from the ear had almost ceased, and the odor of diseased bone, which had pervaded the patient, had disappeared; but I could still feel loose crumbs of dead bone lying in the sinus leading from the auditory meatus to the mastoid cells. Therefore, I widened the sinus with my knife, cutting from the meatus towards the mastoid process, and inserted a tent in the widened sinus. The tent was reinserted; for five days crumbling bone came away, the odor and discharge lessened, and the sinus in the meatus closed October 17, under instillations of a solution of sulphate of copper (3 gr. to f3j). The patient had become by this time quite strong under the constant use of tincture of chloride of iron, and, occasionally, alcoholic stimulants.

During the night of the 19th of October, four weeks after the removal of the mastoid sequestrum, the patient experienced some pain in the ear, but not enough to keep him awake. On the morning of the 20th, he found that "he could not whistle, and that the tears ran over his left cheek constantly." Facial paralysis became fully established on the left side by the 21st; so much so that food lodged between the cheek and teeth on the affected side. There was no continuance of pain, and the patient expressed himself as feeling very well. He took, without my consent, a situation offered to him, and went to work at this time, the paralysis disappearing in two weeks, as I learned subsequently, for I did not hear from him until a few weeks ago, when he visited me and I found him entirely free from paralysis and all aural discharge. He had continued, on his own responsibility, to take the tincture of the chloride of iron until the paralysis had disappeared.

Facial paralysis is not of frequent occurrence in necrosis of the mastoid process, and if it occur it is likely to be permanent. Its permanence is due to the erosion of the Fallopian canal, and an organic lesion of the facial nerve. Its occurrence and subsequent disappearance in this case is of interest and worthy of consideration. It can be explained, I think, as follows:

1. It is well known that the facial nerve will resist the chronic inflammation attacking the petrous bone, long after the Fallopian canal is destroyed. Gruber has reported a case, with an engraving, in which the facial nerve was exposed for two-thirds of its length in the tympanum, by necrosis of the Fallopian canal (Lehrbuch, p. 541), and yet no paralysis ever occurred.

2. It is therefore probable that, the facial nerve becoming unduly exposed, in the case I have described, by caries of the Fallopian tube, a slight acute inflammation in the middle ear furnished pressure sufficient to produce the functional paralysis. The disappearance of the paralysis was of course due to the absorption of the products of the acute inflammation, from which we may learn that, alarming as paralysis of the facial nerve is in *necrosis of the mastoid cells*, we are not obliged, when it occurs, to give an unfavorable prognosis, for we may have, as in this case, simply a temporary paralysis, due to pressure from an effusion of fluids, which can soon become absorbed and permit the nerve to resume its function.

TRANSLATIONS.

PRÆPUTIAL CALCULI.—Dr. F. W. Zahn communicates the following case to *Virchow's Archiv*, February 15, 1875:

The patient, a peasant 52 years of age, was found on examination to be suffering from cystitis, and, in addition, congenital phimosis. The præputial sac was stuffed with stony concretions of various sizes, which rendered urination a matter of some difficulty.

The patient had formerly made use of a catheter, and more recently of a knitting-needle, to press the stones back and thus allow of urination. Quite lately one or

more of the concretions had become dislodged, thus allowing a somewhat freer stream. As the cystitis seemed dependent upon the difficulty of urination, the operation for phimosis was suggested, which the patient refused. He was then put upon quinine, which relieved many of his symptoms, chill, etc., connected with the bladder-trouble.

Six months later, the patient came again under observation. The cystitis had continued, and he was weaker. Two more stones had been passed. An incision was now made, and the concretions removed. The largest of these, rough and convex on its surface and resting on the glans, caused a flattening of the glans, or rather an hour-glass contraction. The urethra was much narrowed to a point about three centimetres from its opening. This narrowing having been enlarged by a tent, the rest of the urethra was found of normal size.

Soon after this operation the patient began to show signs of renal disease, and finally died with symptoms of uræmic poisoning. Unfortunately, no post-mortem examination was allowed. The calculi, fourteen in number, weighed in all 28.5 grammes. The largest was egg-shaped, 29 millimetres long, 26 millimetres broad, and 22 millimetres thick, and had a volume of 9 cubic centimetres. This was the one referred to above as pressing upon the glans. The other concretions varied in size down to that of a peach-kernel, and were of various shapes and appearances. Section showed a central roundish nucleus, sometimes distinguished from the outer layers by being of a reddish color, in other cases by its softer consistency, but always homogeneous. Outside of this the accretion was arranged in concentric layers. The nuclei contained much horny epithelium, which was only sparingly found in the outer layers. After a somewhat minute discussion of the origin of these concretions in general, Dr. Zahn states it as his belief that they are formed around the "epithelial pearls" which are found in the smegma præputii of newly-born children.

X.

CIRRHOSIS OF THE LIVER IN YOUNG CHILDREN.—Dr. Cazalis reports (*Le Progrès Médical*, No. 12, 1875) two cases of cirrhosis of the liver occurring in children seven and nine years of age, respectively. The first child had suffered much from cold, hunger, and privation during the siege of Paris. She presented, on admission to the hospital, moderate œdema of the lower members, abdomen distended with ascites, the superficial veins distended, not painful on pressure; face not swollen, but emaciated. Sonorous râles could be heard in the lungs. The urine contained albumen. About a week later an acute attack supervened, accompanied by very severe abdominal pains, like those of peritonitis, and intense dyspnœa, pulse 130.

During the next few days the dyspnœa diminished, but the ascites increased. Puncture of the abdominal cavity was followed by relief. No more fluid formed there; but the lungs became œdematous, and diarrhœa, erysipelas, and gangrene of the vulva supervened, followed by death. Post-mortem examination showed pleuritic effusion, moderate œdema of the lung with atelectasis of the lower border. The liver was very small, presented plaques of perihepatitis, was mammillated on the surface. The hepatic tissue was hard and resistant. The capsule of Glisson was enormously developed; the parenchymatous substance was circumscribed by fibrous tissue, hard, and of a uniform dark-brown color. The branches of the portal vein were surrounded by an abundant mass of fibrous tissue. The peritoneum was covered with false membrane.

The second case was, in the main, similar to the first. The child had lived in a damp ground-floor apartment, and in a miserable way. The symptoms were very similar to those of the first case, and the autopsy

showed, as in that instance, extreme atrophy of the liver, indications of perihepatitis, mammillations of the surface, and, upon section, fibrous gray tissue, enclosing numerous patent vessels, islets of yellow, soft, glandular tissue, and, in some places, intense congestion. In neither of these cases was there any suspicion of syphilis or malarial poisoning. Dr. Cazalis regards these cases as worthy of record on account of the extreme rarity of the occurrence of cirrhosis at such an early age. X.

QUININE IN SEPTICÆMIA AND TYPHOID FEVER.—Prof. Binz, of Bonn, has made a further contribution to our knowledge of the therapeutic effects of quinine. In a communication published in the *Berliner Klin. Wochenschrift*, No. 8, 1875, he alludes to experiments made by himself and others as to the effect of this drug in preventing a fatal result after injections of putrid material. He has found that in many cases (of dogs) experimented upon, a fatal result may be prevented by the administration of quinine, and even in those cases where death ensues its advent is much delayed. The temperature is lowered in all cases. As to men, Binz quotes Socin, who, at his suggestion, treated great numbers of patients during the Franco-Prussian war by quinine, in doses of from ninety to one hundred grains daily, with great success. Socin likewise suggests the simultaneous administration of alcohol, and says that he has obtained surprising results. Binz also alludes favorably to the use of quinine in typhoid fever, and quotes Liebermeister as saying that if he had to choose between the use of cold applications and quinine in a given case, he would choose the latter. As to the objection that quinine affects the intestines and causes bloody stools, Binz says that this result is due to the use of the sulphate, and recommends using the muriate instead. X.

ANÆSTHESIA PRODUCED BY ESMARCH'S BANDAGE.—Chauvel (*Centralblatt für Chirurgie*, No. 16, 1875) has made fifteen experiments: twelve on the liver, three on the upper extremities; putting on the bandage after having first ascertained the normal sensibility in each case. Diminution of sensibility was observed in each individual, not appearing immediately, but in five to twenty minutes. Insensibility appeared more quickly in the upper than in the lower extremities, its intensity depending on the tightness of the application: it first appeared in the peripheral portion of the trunk, and gradually spread to the upper regions. Insensibility to painful impressions was first noticed, but whether this extended beneath the surface was not ascertained.

In two operations for ingrowing toe-nail with the use of elastic compression very little complaint was made by the patient. In a case of ischiatic trouble the actual cautery was used after compression; anæsthesia, however, was incomplete. It is evident that elastic compression would fail in bringing about complete anæsthesia unless the ligature was placed so near the central portion of the limb as to cause other and inconvenient results. The conclusion is that, as an anæsthetic, compression cannot exclude chloroform or ether. X.

ANTAGONISM OF JABORANDI AND ATROPIA.—M. Vulpian has laid before the Académie de Médecine the result of his researches upon animals, showing the antagonism between these two drugs, and their inverse effect upon the biliary and pancreatic secretions.

Jaborandi excites these secretions actively, but an injection of sulphate of atropia causes their arrest, and the pancreatic fluid and bile are no longer observed to pass from the canulæ previously placed in the ductus choledochus and pancreaticus.—*Le Progrès Médical*, No. 12, 1875. X.

FOREIGN BODIES IN THE AIR-PASSAGES AND CÆSOPHAGUS.—Annandale (quoted by *Centralblatt für Chirurgie*, No. 16, 1875) remarks on the advantage obtained in searching for a foreign body in the larynx through a tracheotomy-wound, if support be given from the mouth by manipulation with the fingers. For the removal of foreign bodies from the bronchus he recommends, after tracheotomy and a deep inspiration, that the trachea be closed temporarily; the deep expiration following often drives the body out. Two cases are given by Annandale (see *Med. Times and Gazette*, February 27) illustrating the successful use of each of these methods.

Krishaber (*Séance de la Société de Chirurgie*, Nov. 11, 1874), in a case of foreign body in the cæso-phagus, caused the patient to drink a quantity of water, and then introduced a dry sponge at the end of a whalebone bougie. When the sponge had become swollen through absorption of water it was withdrawn slowly, and swept the cæso-phagus thoroughly from below upwards, carrying the foreign body, a piece of turkey-bone, with it. Dr. Duplay remarked, apropos of this treatment, that it would be difficult to employ when the patient could not swallow water, and that if the sponge became greatly swollen it might be difficult and painful to withdraw it. X.

PECULIAR APPEARANCES OF URINARY COLORING-MATTER FROM BLOOD COLORING-MATTER.—F. Hoppe-Seyler (*Centralblatt für Med. Wissen.*, March 27, 1875) observed some time ago that in treating an alcoholic solution of hæmatin with tin and hydrochloric acid—as by reduction—a coloring-matter of a peculiar appearance is noticed. This appears of a brownish-red color by transmitted light, and of a deep yellowish-green metallic lustre by reflected light. The author has now found that this coloring-matter is identical with Maly's hydrobilirubin or Jaffe's urobilin. Hæmoglobin itself gives, by similar treatment, a similar coloring-matter. It would appear from this that urobilin is an altered product of decomposition by reduction of the coloring-matter of the blood, and that bilirubin and biliverdin are intermediate products of this metamorphosis.

By this important discovery, the long-asserted origin of this coloring-matter from blood coloring-matter is proved. The amount of urobilin excreted within a given time would serve as a measure of the loss of red blood-corpuscles. X.

RELATIONSHIP OF PUERPERAL AND SURGICAL PYÆMIA.—E. Kleinschmidt, with the object of making a comparison between these diseases, brought together one hundred and eighteen cases of puerperal and eighty-three of surgical pyæmia. The result of the comparison showed certain essential differences. The puerperal affection was found to occur principally in the more youthful, while the surgical disease was more apt to occur in older persons. In the former the initial chill was usually (27 cases out of 40) found to occur in the first week, while in a similar number of cases of surgical pyæmia the first chill occurred in the first, second, and third weeks, which circumstances Dr. K., with C. Müller, explains by the possibility of infection before birth.

The greater frequency of renal abscess in puerperal cases (14.3 per cent. to 15 per cent. against 4 per cent. in surgical pyæmia) is not satisfactorily explained by the peculiarity of the injuries in child-birth.—*Centralblatt für Chirurgie*, No. 16, 1875. X.

DR. E. H. TRENHOLME reports (*Canada Medical Record*, p. 507, 1875) a case of traumatic tetanus successfully treated with chloral and bromide of potassium.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

UNIVERSITY OF MICHIGAN.

MOST of our readers will, no doubt, remember our former editorial upon the University of Michigan. We have received from some of those connected with the institution courteous letters for our private enlightenment, and have perused the public reply of the *Peninsular Journal of Medicine* with care. Either the editor of the latter journal has not read the editorials which have appeared in the *Philadelphia Medical Times* during the last year, or else he is guilty of wilfully disregarding his own motto, "*Ars, ante omnia veritas.*" Any one who habitually glances over our columns must know that ever since the *Times* has been under the present editorial management it has been squarely and outspokenly opposed to the present system of medical teaching upon this continent, and has in no degree exempted the Philadelphia schools from its anathemas. Under these circumstances, to assert, by direct implication, that the editorial of the *Times* was written for the purpose of getting students for "a large Philadelphia medical school," with which the chief editor of the *Times* is so unfortunate as to be connected, is not only not courteous, but betrays a great want of wisdom.

As already stated, we have carefully read the editorial of the *Peninsular Journal of Medicine*, but we see nothing in it to require a revision of that which we have previously written. No new facts are developed. We perfectly agree with our Western

confrère, that the present system "is the fault of our whole system of education and laws on the subject of medicine, and of public opinion and practice." Certainly the University of Michigan did not originate this condition. The great mistake of its governors has been, as we conceived, the neglect of the opportunity peculiarly offered them of reforming the present system, or, in other words, their direct and unnecessary choice of large classes and present popular *éclat*, instead of the higher glory of being the mother of that newer education which must come so surely as the American people are progressing towards a higher civilization and a better government.

One of our correspondents has certainly given us a new idea which has some force in it, namely, that the University is not independent of its classes, because, as we understand it, it is supported by taxes, and the people who pay them would not be satisfied unless the classes were large. This seems plausible; but why does it not hold true in regard to the pharmaceutical, engineering, and other departments of the University? Are the people of Michigan such fools that they could not be made to understand that whilst a half-educated doctor is a pest to society, a thoroughly-educated, intelligent physician is a choicest blessing?

The editor of the *Peninsular Journal* refers to one more fact in confirmation of what he has said "of the thoroughness of the ordeal for the diploma of the University," *i.e.*, in the Jefferson Medical College of Philadelphia, the diploma was granted, in 1875, to more than twice as many in proportion to the number in attendance as at the University of Michigan. There is a possible and very plausible explanation of this fact essentially different from that drawn with such effort by our Western *confrère*,—not that the Western diploma is of more difficult attainment, but that, the diploma of the Jefferson being considered more valuable than that of the University of Michigan, very many students prefer attending only one course in the latter institution, and come East to get their degree. The real reason, probably, is that the first course is taken at the University of Michigan to save expense, but that even the American medical student, during the last course, feels the necessity of that wide clinical teaching which can be obtained only in a great city.

THE London *Lancet* is in a state of great wonderment because a dentist of Scarborough has recovered his fees by suit, although he had an American

diploma. *En passant*, the London *Lancet* above all other journals ought to do its utmost to preserve the well of pure English from the defilement of slang, yet we notice in its report of the Exhibition of the Royal Academy, "There is no portrait or bust of any great gun in medicine." Is the art exhibition a place for artillery-trial, that one should expect to see there a gun "bust"?

A QUICK-WITTED Virginian details in the *Cincinnati Medical News* of May, 1875, the way in which he aspirated (successfully and repeatedly) the bladder of an old man suffering from enlarged prostate, by means of a Davidson's syringe and a hypodermic needle. A piece of india-rubber tubing was fastened to the needle, and another longer one to the nozzle of the syringe, and an attachment between the two made of a quill.

THE abortionists are beginning to reap a little of their deserts. The Dr. Dubois or Perpete, of whom we spoke some time since, has been found guilty of being "accessory after the fact," and a professional named Heap has very recently been executed at Liverpool.

WHO will free this country from the plague of medical schools? We have just received the announcement of the Penn Medical University of this city, with its lists of "alumni" and "alumnæ." Truly the Americans are a long-suffering and much-suffering people.

CORRESPONDENCE.

LONDON LETTER.

[From our own correspondent.]

Medical Affairs in London.—Mr. Erichsen on his American Visit.—Why Sir Henry Thompson did not come.—Sir William Fergusson and Sir James Paget at Norwich.—The Debate on Vivisection.—American Physiologists.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IF, after a long silence, I may again take up my pen to renew correspondence, I will utilize part of my Easter holiday to tell you of some of the doings of London doctors during the last winter session.

I hardly know where to begin amidst the crowd of small matters that suggest themselves for discussion. To begin with, the earlier part of the session we had Mr. Erichsen's address on the experiences of his American tour. To say the truth, these were disappointing. Mr. Erichsen has a good reputation here for sound judgment, and, although the surgeon has never been on a level with his book in reputation, we expected that with so many advantages of observation, and so well-trained a critical capacity, Mr. Erichsen would have brought us home something new. He has, however, done nothing of the sort; whether he troubled himself

little about surgery, but more about the delights of hospitality and the pleasures of society and scenery, I cannot say, but the story which he was well qualified to tell, and which we hoped to have heard from him, has not been told. He has, however, paid a handsome tribute to the skill, capacity, and moral worth of the professional classes with whom he was brought into contact.

In missing the visit of Sir Henry Thompson you lost a guest who would probably have been more communicative on his return, and who has a considerable power of expression. The preliminary sufferings of sea-sickness on the way from Liverpool to Kingstown appear to have kept him away, and he compensated himself by a long tour in Italy, from which he did not return till November. Our English surgeons are thus beginning to emulate yours in their long vacations of months. Since he has come back he has resigned his office at University College Hospital, confining himself entirely to private practice. I believe that Mr. Erichsen also desired to resign, but was persuaded to hold on a little longer, as the Hospital could not have lost its two principal surgeons without incurring a serious loss of prestige.

If you desire a *vates sacer* who can with adequate eloquence describe what he sees, you must secure Sir James Paget; he is the orator of the profession; and his felicitous words gain added weight by the nice accuracy of thought which they convey. At present very few medical men here are at all acquainted with the extent of American medical institutions or the high standard of scholarship in the foremost ranks of your professional men. American degrees of a spurious and worthless kind are still freely sold here to quacks, and occasionally prosecutions, in which they are brought forward as an answer to charges of unqualified practice, sustain the prejudice.

Sir James Paget has been the object of attack here in consequence of his having sanctioned by his presence and approval the performance of certain experiments at Norwich, on a dog, by M. Magnan of Paris, with a view of demonstrating to the members of the British Medical Association the difference of action of alcohol and absinthe. Two "wild Irishmen," Professor Hughton and Mr. Tufnell, interfered,—Mr. Tufnell behaving with unqualified violence, and endeavoring to release the animal and stop the experiment. Mr. Tufnell had introduced a lay friend, and a policeman, I believe, was summoned. Ultimately Sir James Paget was appealed to; he sanctioned the completion of the experiment, on the ground that it "tended to the advancement of knowledge useful for the relief of disease." This scene led to a prosecution by the Society for the Prevention of Cruelty to Animals, and ultimately, although an acquittal was obtained, the decision was not one unequivocally favorable to the defendants. Mr. Tufnell holds for this year the position of President of the Royal College of Surgeons of Ireland; and, although he showed himself intensely ignorant of the subject in which he took so active a part, his official position produced a strong impression of his authority to speak for the profession. Unfortun-

nately, also, he found an unexpected ally in Sir William Fergusson. Although ignorant of the experiments, and of the relative facts of the action of alcohol and the essential oils, Sir William Fergusson allowed himself to be seduced into a general condemnation of physiological experimentation by the injection of fluids into the blood, and he declared that he considered it a barbarous and cruel proceeding.

The profession at large has viewed the course taken by Mr. Tufnell and Sir William Fergusson with great indignation and regret; not so much at the peculiarity of their opinions and the wild way in which they have expressed them, as at the reckless ignorance and intemperance with which they have publicly denounced methods of which they evidently do not understand the value, and experiments which they had not taken the trouble to study. The sequel of this "national prosecution" has been the commencement of a public agitation to impose legislative restrictions upon the practice of experimentation upon animals. A petition has been circulated, under the especial auspices, it is stated, of Mr. Hutton, the editor of the *Spectator*, Miss Frances Power Cobbe, Miss Burdett Coutts, and others, openly charging physiologists with the practice of daily barbarities of a wanton character. It is especially charged that American physiologists are guilty of cruelties which are revolting to humanity; that they are in the habit of daily demonstrating by vivisection of living animals, and of encouraging their students to similar cruelties. These charges were expressly refuted in the *Times* newspaper by Mr. Ernest Hart, who declared from his own knowledge, and from documents which he quoted, that the statements which have been published in every newspaper of London and throughout England by these memorialists as to the barbarity of American medical teachers and physiologists were "a foul calumny." In last week's number of the *Spectator*, however, Mr. Hutton again intimates that he adheres to the original view. I think it would be worth while for some of your American physiologists to look up the papers, and to send a formal repudiation of Mr. Hutton's charges to the *Spectator*, or, better still, to the *Times*; for the matter is not yet ended. A bill has, it is stated, been framed, and is now about to be introduced, with a view of penalizing physiological experiment; and, no doubt, during the discussion these stories of the daily horrors perpetrated by American teachers and their students will be again revived as examples of the moral degeneracy which is the consequence of practising vivisection! Dr. Bartholow's experiment on the exposed brain of a patient at Cincinnati has been this week trotted out at length in the *Spectator*, as an example of what is likely to happen to human patients in the future if this moral degeneracy be not checked. There is no greater intolerance than that of the humanitarian enthusiast towards people who know him to be wrong; and it has never been more strongly exhibited than in this case. A curious feature in this movement is that it is largely supported by sportsmen, on the ground of their great love of—dogs. The blood-

thirsty humanitarian this week expresses the delight which it would give him to "wing" any investigator who should for any purpose inflict suffering on a dog.

As this controversy has extended over many months and is still in a critical condition, and as it has largely included a discussion of American character as well as of medical proceedings, you must excuse me for allowing it to occupy so large a space in this letter.

I shall next week have much to tell you of our arranged scientific work for the next few months; of the progress of medical schools for women; of prosecutions of midwives for spreading puerperal fever, and of a surgeon for cutting away fifteen feet of intestine from a lying-in woman; *et alia multa*.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

WEDNESDAY, January 6, 1875.

DR. JOHN ASHHURST, JR., read a paper on *Excision of the Elbow*, narrating eight cases in which he had excised the elbow-joint, and appending a few practical remarks upon the rules which should guide the surgeon in determining to resort to this mode of treatment, upon the steps of the operation itself, and upon the after-management of patients.

He stated that excision of the elbow-joint when practised in persons past the middle period of life is attended with no inconsiderable risk. Thus, of fifteen cases of excision of the elbow-joint for disease in persons of forty-five years and over, collected by Dr. Hodges, of Boston, six proved fatal (two after amputation), while recovery was obtained in only nine. This rate of mortality (40 per cent.) is no doubt larger than that which attends amputation performed under similar circumstances, but the result of a successful elbow-joint excision is so satisfactory, enabling the patient to return to his ordinary occupation,—a most important matter for a laboring-man,—that the surgeon is fully warranted in recommending the graver operation in suitable cases. His cases were as follows.

Case I. Arthritis of left elbow in an elderly man; excision; death from exhaustion on thirty-third day.—This case having been already reported in the *American Journal of the Medical Sciences* for January, 1868, p. 42, we do not here reproduce it.

Case II. Excision of the right elbow-joint for disease in a young adult; death from tuberculous meningitis.—As a notice appeared in vol. iii. of the Proceedings of the Philadelphia Pathological Society (p. 157), we do not reproduce it.

With regard to the structural changes met with in this and similar cases, Dr. Ashhurst agrees with Barwell in regarding the so-called "pulpy" or "gelatiniform degeneration" as essentially the same as the granular change met with in cases of ordinary synovitis, the difference being that in the latter affection this granulation tissue undergoes further development, whereas in the cases now under consideration it remains in a rudimentary state. In fact, it occasionally happens that in one part of a joint the synovial tissue is found to be entirely replaced by organized intra-articular adhesions, while in another part of the same joint it may present the characteristic appearances of the gelatiniform change.

Case III. Excision of the right elbow; recovery.—Josephine K., aged 7 years, was admitted to the Children's Hospital on October 16, 1870, suffering from arthritis of the right elbow, the result of an injury received some six months previously. The joint was painful and tender, hot, and swollen, particularly at its radial side. After a fair trial of the effect of rest, with the administration of tonics and the topical use of soothing applications, excision was resolved upon, and on December 19, 1870, the patient having been etherized, the operation was performed, the joint being laid open by a single longitudinal incision, and the articulating extremities of the several bones removed with the "Butcher's saw." The joint was found to be full of pus, which gushed out as soon as the knife entered the articulation, the cartilages were eroded (especially over the head of the radius), and there was incipient caries of the subjacent bones. No ligatures were required, and, the edges of the wound having been brought together with leaden sutures, a strip of oiled lint was applied, and the limb placed at an angle of about 120° in a felt splint, which, however, bred maggots in the dressings, and was therefore replaced by a simple wooden splint on the third day. The after-progress of the patient was satisfactory; an abscess which formed in the neighborhood of the excision-wound was opened on January 31, 1871; and in the following March the splint was left off, and a simple soap-plaster and bandage substituted. The motions of pronation and supination were by this time fully restored, and there was slight power of flexion and extension, which could doubtless have been materially increased had the patient persevered in systematically exercising the limb. This, however, was not done, and ankylosis as regards flexion and extension eventually occurred. The patient was discharged from the hospital on April 15, 1872, but the last occasion upon which I saw her was in February, 1874, at which time the condition of the resected arm was very satisfactory, the limb, though stiff, being extremely useful, and the motions of pronation and supination being, as before remarked, perfectly restored.

Case IV. Compound fracture and dislocation of right elbow-joint in an adult; excision; death on seventh day from delirium tremens.—The subject of this case was a teamster, J. C., an Englishman by birth, and 51 years of age, who on March 27, 1871, was thrown from his wagon against a curbstone, sustaining such severe injuries as to necessitate his being brought to the Episcopal Hospital, where he was admitted shortly after the occurrence of the accident. Upon examination it was found that the patient had received a compound forward dislocation of the right elbow, with fracture of the olecranon; he strenuously objected to amputation, and, as the injury was limited to the parts entering into the articulation, it was determined to make an effort to save the limb by excision, though the intemperate habits of the patient (he confessed to half a gallon of beer daily) rendered the prognosis of the case less favorable than it would have been under other circumstances.

Ether having been administered, the joint was excised in the usual way,—viz., by making a single longitudinal incision between the olecranon and internal condyle, and, having turned out the ends of the bones, sawing them off with Butcher's saw. Two ligatures were required, a tent of oiled lint was introduced and the extremities of the wound closed with sutures, and the whole was then wrapped with a cloth dipped in laudanum, and the limb placed at rest on an obtuse-angled Physick's splint. The patient did well for four days, when he was attacked with delirium tremens, which carried him off on April 3, just one week from the date of the operation.

Case V. Excision of left elbow-joint for arthritis; recovery.—The patient in this case was a boy, R. A., aged 10 years, a native of Scotland, who was admitted to the Episcopal Hospital on January 11, 1872, suffering from arthritis of the left elbow, the result of an injury received one year previous. Excision was performed in the usual way (the joint being opened by a single incision made in the direction of the long axis of the limb) on January 18. Five ligatures were required, the excision wound was dressed with oiled lint, and the arm placed on an internal angular splint. The excised parts presented a good example of ulceration of the articular cartilages with incipient disease of the underlying bone. The splint was left off in the course of a few weeks, and care taken to prevent the occurrence of ankylosis by the systematic use of passive motion. The result of the case was in every respect satisfactory, the patient leaving the hospital on June 1, 1872, with the wound firmly healed, and with the normal motions of the part quite restored.

Case VI.—Excision of the left elbow-joint in a young child; splint left off after the eighth day; recovery.—The subject of this case, G. P., a boy 4 years of age, entered the Children's Hospital on August 8, 1872, suffering from disease of the left elbow-joint of one year's duration, believed to have originated from an injury, though the history of this was not very clear. Excision was performed in the usual manner on August 12, two ligatures only being required, and the wound being closed with sutures, dressed with oiled lint, and placed on a splint; this, however, was dispensed with after the eighth day, by which time the wound had united, and the parts were measurably consolidated, the limb from this time forward being simply supported in a broad sling. The principal seats of disease were the base of the trochlea and the greater sigmoid cavity of the ulna, at which points the cartilage had disappeared, and the subjacent bone was carious and deeply eroded. The progress of the case after the operation was satisfactory; an abscess which had formed in the neighborhood of the joint was opened on February 28, 1873, and the patient left the hospital on May 28 of the same year. The wound was firmly healed, the arm strong, and the motions of the part perfect in every respect.

In the next case the patient made a good recovery so far as the operation was concerned, but perished from the effects of constitutional disease nearly seventeen months subsequently.

Case VII. Excision of the right elbow-joint for destructive disease, the result of hereditary syphilis; recovery; death from syphilitic disease of the brain.—The patient in this case was one of those unfortunate children of whom we see so many in surgical practice among the poor of large cities, who enter upon life bearing about them the seeds of death, and who, after a few years of suffering, perish miserably, the victims of their parents' misconduct. J. S., a boy 6 years of age, entered the Children's Hospital on September 4, 1872, suffering from hereditary syphilis in an aggravated form. The record at the time of his admission shows that he had then necrosis of the left radius and of the lower jaw, with severe osteitis of the right humerus, extending to the lower epiphysis of the bone and threatening the integrity of the elbow-joint. A day or two after admission, a superficial exfoliation was removed from the radius, and on September 9, the patient being etherized, a large sequestrum was taken from the jaw, the portion removed extending to the articulation of the left side, and constituting about one-third of the lower maxilla. Under careful nursing and constitutional treatment, the patient's general condition now improved, and the jaw and left arm healed; the state of the right arm, however, became steadily worse, and in January, 1873, it

became evident that the elbow-joint was hopelessly diseased. Excision was accordingly resorted to on January 13, the operation being performed in the usual way, the wound dressed with oiled lint, and the limb laid upon a splint, which, however, was dispensed with as soon as the parts had become sufficiently consolidated. The progress of the case, so far as the operation was concerned, was satisfactory, the wound healing well, and the patient regaining considerable use of the limb; but fresh evidences of constitutional syphilis were not slow to manifest themselves. Gummatous tumors, which rapidly ulcerated, formed on the arm, on the shoulder, and on the side of the chest; the upper jaw became necrosed, and in October about one-third of its alveolar border was removed; finally, in June, 1874, symptoms of cerebral disease were developed, the patient lying in a stupor unless aroused, when he was delirious, but without excitement; and in spite of the administration of large doses of iodide of potassium, death, preceded by coma, took place on June 7. No post-mortem examination was permitted, but there can be little doubt that intra-cranial syphilis was the cause of the fatal issue.

The next case is illustrative of a condition perhaps more often met with in the knee than in the elbow, but which may, Dr. Ashhurst affirms, when occurring in either situation, in children at least, be treated by excision with the most gratifying results.

Case VIII. Excision of the left elbow-joint for partial ankylosis with recurrent arthritis; recovery.—This case occurred in a German boy, C. K., 6 years old, who was admitted to the Episcopal Hospital on March 24, 1873. A year before, the left elbow had received an injury, the nature of which was unknown, and for which no treatment had been employed. The joint, at the time of the patient's admission, was partially ankylosed, tender and painful on motion, with considerable thickening of the soft parts, and a distortion which simulated partial displacement of the radius. The part was constantly getting hurt, and every fresh injury left the limb more crippled than before. Excision was performed in the usual way on March 27, the lower epiphysis of the humerus being found to be separated and slightly carious, and the soft tissues of the joint presenting in parts the pulpy or gelatiniform change which has already been alluded to. The after-progress of the case was perfectly satisfactory; all the sutures were removed on April 1 (no ligature had been required); on April 18 the patient was allowed to get up; by May 17 the wound was almost healed, and the functions of the part were in a great measure restored; and, finally, on November 13 the patient was discharged from the hospital, cured.

Remarks.—Dr. Ashhurst enumerated the following reasons for the operation of excision of the elbow-joint: Grave wounds of the articulation; compound fractures implicating the joint; compound dislocation; arthritis which has resisted non-operative measures, or which has advanced to the stage of destructive disorganization, —and particularly arthritis of the gelatinous variety; fibrous ankylosis when complicated by frequently-recurring attacks of inflammation of the joint; and bony ankylosis, when the limb is in such a position as to render it useless to the patient. The operation is, indeed, recommended by some writers in cases of bony ankylosis in a good position; but Dr. Ashhurst had never felt justified in resorting to it under these circumstances.

Excision of the elbow may be resorted to with much greater freedom than excision of other large joints, because the mortality after the operation is so moderate, and the result of a successful excision so much better

as regards the utility of the limb than the cure obtained by the occurrence of ankylosis.

The chief contra-indications to excision of the elbow have regard to the *age* of the patient and to his *constitutional condition*, particularly in respect to the existence or non-existence of visceral disease.

The influence exercised by the *age* of the patient upon the result of the operation is shown by the following recast of Hodge's table of 119 cases of excision of the elbow for disease of the joint:

AGE.	RECOVERED	DIED.	AMPUTATED.	NOT TERMINATED.	TOTAL.
Under 10	3	1	2*	...	6
10 to 20	27	3	2*	...	32
20 to 30	28	3	6*	2	39
Over 30	26	7	5†	...	38
Not stated	3	1	4
Aggregate	87	15	15	2	119

This table shows that while the mortality for all ages under thirty is but about 9 per cent. (77 cases, 7 deaths), the mortality for all ages over thirty is almost 24 per cent. (38 cases, ‡ 9 deaths).

The *constitutional condition* of the patient exercises a very important influence on the result of the operation. There is perhaps less immediate risk attending an excision of the elbow than an amputation of the arm, on account of the comparative freedom from hemorrhage in the case of the first-named operation; but the much longer period required for convalescence after excision exposes the patient for a longer time to the risks of erysipelas, pyæmia, etc., and gives opportunity for the development or aggravation of tuberculous and amyloid degenerations.

Hence, should there be reason to suspect serious disease of the lungs, liver, or kidneys, the operation of excision would be so far contra-indicated, and, if under these circumstances any interference should be required, preference should, as a rule, be given to amputation.

Except in his first case, in which he adopted the H incision of Syme and Butcher, Dr. Ashhurst has uniformly employed and much prefers (as originally suggested by Park) a single longitudinal incision on the inner and posterior side of the joint. With a little practice this mode of operating is found quite as easy as any other, while it has the great advantage of leaving a linear wound which has no tendency to gape.

The length of the incision may vary from two to five inches, according to the size of the arm. Its direction should, of course, correspond with the long axis of the limb, and it should pass on the inner side of the olecranon and a little on the radial side of the ulnar nerve. In order to guard against loss of the power of extending the limb, Prof. Spence recommends that the triceps tendon should be divided by means of an incision in the form of an inverted A, while with the same object Mr. Maunder takes care to respect those fibres of the tendon which are inserted into the fascia of the fore-arm. Either of these plans may be adopted with good result. Prof. Sayre's plan of leaving the portion of the olecranon to which the tendon is attached, Dr. Ashhurst feared, would increase the risk of ankylosis.

The points of most importance in the operation are to save the ulnar nerve from injury, and not to interfere with the tubercle of the radius, so as to preserve the attachment of the biceps muscle. In excisions for

* Recovered after amputation.

† Two recovered; two died; result of one not mentioned.

‡ This includes the two cases which terminated fatally after amputation.

disease, the nerve need give no trouble, for it is so imbedded in inflammatory tissue that it can be readily drawn from its position in the groove between the olecranon and internal condyle, and held to the inner side, and indeed need not be seen during the whole operation. In traumatic cases more difficulty is, of course, experienced; though even here a little care suffices to avoid any untoward accident. Provided that the tubercle of the radius is preserved, the more bone (within certain limits) that is removed, the better will be the result of the operation; the risk of ankylosis is much greater than that of flail-like union, and hence the saw may be used freely, without any dread of interfering with the future utility of the limb.

In the *after-treatment* of a case of elbow-joint excision, the most important point is to guard against the occurrence of ankylosis; and this may best be done by abandoning the splint at a very early period,—as soon as the external wound has united and the inflammatory swelling which always follows the operation has subsided. Some writers, indeed, go so far as to recommend that no splint at all should be employed, but that the limb should be, from the first, simply laid upon a pillow. This advice seems to Dr. Ashhurst injudicious, particularly in the case of children. By putting the limb at rest upon a well-padded splint for a week or ten days, the risk of consecutive hemorrhage is greatly diminished, the inflammatory action which follows the operation is lessened, and the part is placed in the most favorable condition for rapid repair.

The chief *statistics* of the operation are as follows: Heyfelder and Boeckel have tabulated in all 203* cases of total and 79 cases of partial excision of the elbow. The result in one of the cases of total excision is not stated, but of the remaining 202, 8 were saved by amputation, while only 24 terminated fatally, giving a

death-rate for the operation as performed for all causes of less than 12 per cent. If excisions for chronic disease only are considered, the figures are 145 cases, with 20 deaths and 7 consecutive amputations, a mortality of over 13 per cent. The 79 cases of partial excision gave 8 deaths and 3 amputations, a mortality of but little over 10 per cent. Hodge's statistics, which, though less extended, are probably more accurate, give a slightly different result; of 119 cases of excision for disease, 15 terminated fatally and 15 required subsequent amputation, death moreover following in 2 of the latter; these being included in the list of fatal cases, the death-rate is found to be over 14 per cent. It is to be observed, however, that these figures embrace both complete and partial excisions, as well as 16 cases in which it is not mentioned whether the whole joint was or was not removed. If the complete excisions alone are considered, the figures are 82 cases, with 7 deaths and 7 amputations (one fatal), the mortality thus being but a little more than 10 per cent. On the other hand, 21 partial amputations gave 5 deaths and 3 subsequent amputations, a mortality, therefore, of nearly 24 per cent. Ollier has laid great stress upon the importance of preserving the periosteum in excisions of the elbow, and has reported 35 cases of the sub-periosteal operation, with 30 recoveries and 5 deaths, a mortality of over 14 per cent.

When performed for traumatic causes, the operation in civil life would appear to be ordinarily attended with very little risk, 21 cases referred to by Dr. Hodges having given but one death, and that "from causes in no way attributable to the excision." In military practice the results are not so favorable, 286 terminated cases noted in "Circular No. 6" having given 62 deaths, a mortality of nearly 22 per cent. It is, notwithstanding, in military practice that excision of the elbow has gained some of its most brilliant successes.

Summary of the Cases detailed in the Preceding Paper.

No.	NAME, SEX, AGE, ETC.	NATURE OF AFFECTION FOR WHICH OPERATION WAS REQUIRED.	RESULT; DURATION OF TREATMENT AFTER OPERATION.	REMARKS.
1	B. F., male, 56, blacksmith.	Arthritis of left elbow.	Died; 33 days.	Death from exhaustion.
2	J. D., male, 25.	Gelatinous arthritis of right elbow.	Died; 19 weeks.	Death from tuberculous meningitis.
3	J. K., female, 7.	Arthritis of right elbow from injury.	Recovered; 16 months.	Ankylosis as to flexion and extension.
4	J. C., male, 51, wagoner.	Compound fracture and dislocation of right elbow.	Died; 7 days.	Death from delirium tremens.
5	R. A., male, 10.	Arthritis of left elbow from injury.	Recovered; 4½ months.	Normal motions of part restored.
6	G. P., male, 4.	Arthritis of left elbow.	Recovered; 9½ months.	Normal motions restored.
7	J. S., male, 6.	Right elbow destroyed by constitutional syphilis.	Recovered from operation; died 17 months subsequently.	Death from syphilitic disease of brain.
8	C. K., male, 6.	Partial fibrous ankylosis of left elbow, with recurrent arthritis.	Recovered; 7½ months.	Normal motions of part restored.

GLEANINGS FROM OUR EXCHANGES.

A MEDICO-LEGAL CASE (*Boston Medical and Surgical Journal*, May 6, 1875).—The following appearances were observed at a post-mortem examination of the body of a woman who was struck, while lying on the track, by a train of cars, and who it was afterwards found had had some altercation with a man early in the evening of the day of the accident. They are interesting as an illustration of the value and importance of a thorough autopsy, even in cases where the cause of death seems at first sight to be very apparent.

"Over the right malar bone there was a lacerated wound one inch in length. A similar wound extended across the nose, which was crushed and forced to the left. Beneath the left eye there was another laceration,

about one inch in length. These wounds were surrounded by bluish-red discolorations, which when incised showed very slight extravasations. The skin of the face in the immediate neighborhood of the wounds was slightly stained with blood. Upon the anterior and lateral portions of the neck were several irregularly-shaped yellowish-red marks, which upon being incised disclosed no extravasations. There was an irregular opening about four inches in diameter, with ragged and thinned edges, located in the skin of the chest about four inches below the middle of the right clavicle. About this opening there were several dark-reddish patches. The right arm was torn from the shoulder, and hung by a few shreds of skin. The left arm was entirely separated from the body about four inches below the shoulder. There were patches of ecchymosis in the substance of the scalp over the posterior portion of the occipital bone and also over the left temporal bone. The vessels of the scalp were congested. The vessels of the dura mater and pia mater were exceed-

* Incorrectly numbered in Boeckel's translation of Heyfelder's Treatise 25 208.

ingly congested. The cerebral sinuses were full of dark semi-fluid blood. All the vessels of the brain were engorged with blood. There was no fracture of the base of the skull. The superior maxillary, malar, and nasal bones were fractured and displaced backward and to the left. The lower jaw was fractured. In the connective tissue anterior to the fourth and fifth cervical vertebræ, under the cornua of the hyoid bone, and also posterior to the larynx, were decided clots of blood. The lining membrane of the trachea was of a bright-red color and intensely congested. Anterior to the body of the cricoid cartilage, commencing at the lower border of the vocal cords, there was a marked ecchymosis. The spinal column, from the seventh cervical to the first lumbar vertebra, and the walls of the chest, were crushed. The thoracic viscera were ground to fragments. Small portions of the lung only could be identified; these portions were of an evenly-diffused dark-purple color, and excessively congested. The vessels of the mesenteries were full of dark blood. The vena cava ascendens was also distended with blood. All the other organs were examined and found to be in a healthy condition."

In the opinion of the physicians, death was caused by asphyxia, resulting from strangulation, produced at some period anterior to the passage of the railway-train over the body.

HOT BATHS (*Medical Press and Circular*, April 7, 1875).—The following practical rules have been suggested by Prof. Lasegue:

No hot bath ought to exceed twenty or thirty minutes in duration.

The initial temperature ought always to be lower than the final temperature.

The increase of temperature ought always to be gradual.

The maximum temperature is usually 103° , but 108° can easily be tolerated if the patient does not remain in this temperature longer than eight or ten minutes, and if the unpleasant sensation produced by the vapor on the part of the body which is not immersed is avoided. On leaving the bath the patient goes to bed, and soon loses the sensation of unusual heat. Cold douches, which are so agreeable after hot-air baths, are not well borne after hot baths.

Lasegue has found a prolonged course of hot baths very useful in chronic rheumatic arthritis. Under their influence the movements of the articulations have become less difficult and painful. A similar mode of treatment has been found useful in chronic abdominal complaints, such as protracted diarrhoea, and even in obstinate chronic bronchitis.

AN APPLICATION TO PREVENT PITTING OF SMALLPOX (*British Medical Journal*).—Dr. J. Ward strongly recommends the application of honey two or three times a day by the aid of a camel's-hair pencil for more general and extensive trial, inasmuch as it seems to present many of the qualities desired,—viz., exclusion of the air, preserving the parts permanently moist, and lessening of the local irritation; while it is an application gratefully detergent and harmless, permitting the transpiratory function of the skin. The domestic application of honey to the skin of the hands and other exposed surfaces of the body, when rough or cracked from the effects of frost, etc., is more or less known, and, when tried, fully appreciated. It is not unlikely that, when applied early and repeatedly to a more extensive surface than that usually exposed to the air, and even to the roots of the hair, its primary and somewhat unpleasantly sticky feeling would speedily give place to a sense of general soothing and comfort, from its effect of allaying the irritation which is so troublesome a feature in smallpox.

A STYLE FOR OBSTRUCTION OF THE LACHRYMAL APPARATUS (*The Lancet*, April 24, 1875).—Mr. R. Taylor has introduced a form of style which has many advantages over all others, and which he has used constantly and with great advantage. This style is a straight piece of silver to fit the nasal duct, having at right angles to it, at the upper end, a small arm about three-eighths of an inch in length; it is introduced along the slit-up lower canaliculus, through the lachrymal sac, into the duct. The little horizontal arm lies in the channel of the canaliculus, which it keeps open, and prevents the style from slipping out of sight, allowing ready removal when necessary. The canaliculus is slit up in the usual way, and he then either dilates for a short time with the ordinary probe and then puts in the style, or more generally, where the case is a straightforward one, introduces the latter at once. Different sizes are required. The style requires to be taken out and cleaned occasionally, and if there be any irritation set up by it, which is not common, the removal of it for a day or two is generally sufficient to allow it to be worn with ease. Patients are so comfortable while wearing it that they often neglect to appear at the end of a month or six weeks to have the instrument removed.

TREATMENT OF WHOOPING-COUGH (*American Practitioner*, May, 1875).—Wild claims that he can cure every case of whooping-cough within eight days by the following treatment: the patient is not to leave his room, and at every access of coughing is to place before his mouth a small piece of cloth folded several times and wet with a teaspoonful of the following solution: ether, sixty parts; chloroform, thirty parts; turpentine, one part.

ERYSIPELAS, SEPTICÆMIA, PYÆMIA (*The Lancet*, April 10, 1875).—Mr. Jonathan Hutchinson has demonstrated that erysipelas, which is so potent an agent in producing puerperal fever, is *not* a specific fever; that it is simply a local inflammation, to which all its febrile and general symptoms are superadded,—a view supported by its unilateral character, by the absence of any incubative period, and by it being possible to cut short its extension by appropriate treatment. In this respect it resembles inflammation of the uterus. The term "septicæmia" should be limited to poison introduced into the blood from the patient's own tissues, which may have been primarily inflamed by irritants derived from without, or even without any external cause whatever; while "pyæmia" has its sole origin in a suppurative phlebitis.

MISCELLANY.

A LADY who is ardently opposed to vivisection, and who would like to have the letter V branded on the right hand of every vivisectionist, was about to have a dinner-party of ladies and gentlemen of her own opinion. The night preceding this great occasion she ordered of her intelligent fishmonger a crimped skate, and in the afternoon of the important day was astounded by the announcement of the cook that the fishmonger, Mr. Donald (his further name we have pledged ourselves not to divulge), had failed to send in the fish. In dudgeon our philanthropic lady, whose impulses were always ahead of her reason, whipped on her bonnet and away to the man of the marble slab and cold-blooded viands. She found him putting the finishing touch to the skate, and, having first rated her experimentalist for his delay, went on, "peppery like," as Donald noted, to find fault with his work. Donald, of

course, laid the delay on the market, and as to the fault in the crimping, he urged that if he couldn't get the animals until they had hardly a drop of life in their bodies, how could they be expected to crimp like real live ones? The lady, convinced by Donald's arguments, or fearing further delay, calmed down, and, begging the fish might be sent around immediately, was about to leave the shop, when her eye caught sight of a small moving object on the side-counter. "Why, Mr. Donald," she exclaimed, "what is this? it is moving like a watch." "That, madam," replied Donald, "is the heart of the skate; it's laid aside for a medical gentleman, who studies the heart, to see how long it will just throb." The effect on the lady was electrical. "A vivisectionist!" she almost screamed; "and you, Donald, minister to his barbarities?" Donald stood aghast; he expected next moment to hear the request that he might send in his bill. But a new light seemed to fill his visitor's face; she spoke persuasively, yet decidedly. "Donald," she asked, "who is this wretch? We may now establish a case." Donald was on guard; he was between Scylla and Charybdis, for the doctor was as good a customer as the philanthropic lady; but he was equal to the occasion. "Madam," he replied, "I ken naething o' the gentleman, mair than he's student-like, grave and serious. When he ca's to-day for the heart, if I dinna mind his name and address, I'll e'en ask him." "Do, Mr. Donald, pray do," she answered, and, seeing a hansom cab passing the door, hailed it instantly. Donald went to open the folding doors of the vehicle for her, and heard the conversation with the cabman. "Drive me quickly to the R. S. P. C. A." "To the Arispiciary," says the driver, spelling it to himself. Then down into the cab, "Is it the new resterong at 'Ighbury, mum?"

"No, it's the animal place; take me, take me to Mr. Colam!"

Cabby,—who thought he now saw his way,—down again into the cab, "At the Zoo, mum, I suppose."

"The Zoo! No; though I believe that's a bad place enough. Jermyn Street."

And away, as fast as a wearied horse—keeping a hasty lady from friends expected at dinner—could speed under influence of jerk of rein and cut of whip, away she sped.

Meanwhile, Donald, surmising that his shop might by-and-by be under uncomfortable surveillance, picked up the still beating skate's heart, put it into a gallipot, and away himself with it to his patron the doctor. Could he see the doctor for just a second? He could, and was shown straight into the study. The man of science was busy fitting up a reoscope when Donald entered.

"I brought ye, sir, the skate's heart; it seemed to me to be stopping a wee, so I brought it mysel'."

"Thank you much," answered the doctor, taking his treasure and watching the motion. "It's a strange phenomenon."

"Mair strange than ye yerself ken, doctor," said Donald, with a knowing look.

"All God's works are, Mr. Donald," was the solemn

reply of the philosopher. "Thank you again, and goodbye."

And Donald, thinking he had done enough, withdrew. He had saved his patron from being possibly followed by a detective, which was what he wanted.—*British and Foreign Medico-Chirurgical Review*, April.

NOTES AND QUERIES.

PHILADELPHIA, May 3, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—In reply to the letter of Dr. J. J. Leiser, which appeared in the number of May 1, I would state that I have used hydrate of chloral in five cases of puerperal convulsions with perfect success; in two cases other means had proved ineffectual.

In the administration of chloral I follow the following simple rules.

1. To bleed if the patient is plethoric,—not with any idea of its arresting or decreasing the convulsions, but to relieve the engorged vessels, which done, renders the stomach more absorbent.

2. To give ʒj of chloral every fifteen minutes in large quantity of liquid, and, if the patient cannot swallow, give ʒss of chloral by the rectum every half-hour, till convulsions cease.

3. Combine the chloral with some alkali (I usually use bromide of potassium), for I have found to exist a certain condition of the stomach or blood which does not allow the decomposition and absorption of chloral to take place readily unless combined with an alkali. In my last two cases this combination was made after the chloral alone refused to act promptly.

The above are the simple rules which guide me in the administration of chloral, and I have as yet not been disappointed in a single case.

I use chloral extensively in my obstetrical and uterine practice, and wish no better medicine of its class.

In regard to hydrate of chloral, we have at present on the drug-market two specimens, *one a perfectly worthless article*. The good drug is recognized at once by its pungent odor and smell of walnut; it is also in perfectly white crystals, and if examined by being held up before the eye the crystals will appear almost transparent.

The other article is of a yellowish-white, sometimes entirely white color, uncrystallized, exceedingly pungent, having the irritating odor of chlorine, and a smell somewhat like cucumbers.

Care should be taken by the physician in prescribing to call distinctly for the first article, and I am certain there will be less disappointment.

In looking over the case of the doctor, I find that he gives twenty grains of chloral at the start, then gives in *half an hour* thirty-five grains, giving in the hour about *fifty-five* grains, where I would have given *eighty grains at the lowest*. In an hour he repeats the *thirty-five* grains, which is *forty-five* grains less than I would have given. He gives in all one hundred and twenty-five grains in eight hours; I would have given, according to my method, six hundred and forty grains. This quantity *would not have been given*, for I am firmly convinced that had the doctor repeated at short stated intervals his doses, the convulsions would have ceased before *half the quantity* had been used. In my first case I used two hundred and twenty grains in eight hours, almost double the quantity used by Dr. L.; it was only after the *eight scruples* had been taken that the medicine seemed to act.

I therefore think that the want of success lies with the doctor in not giving freely the chloral, and not from the want of action in the medicine. When chloral is given in puerperal convulsions it must be given boldly.

Yours respectfully,

EUGENE P. BERNARDY, M.D.

1011 WALNUT STREET.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 11, 1875, TO MAY 17, 1875, INCLUSIVE.

KINSMAN, J. H., ASSISTANT-SURGEON.—Assigned to duty at Fort Ripley, Minn. S. O. 83, Department of Dakota, May 11, 1875.

HEIZMANN, C. L., ASSISTANT-SURGEON.—Leave of absence extended three months. S. O. 89, A. G. O., May 12, 1875.

PAULING, H. O., ASSISTANT-SURGEON.—Assigned to duty at Fort A. Lincoln, D. T. S. O. 78, Department of Dakota, May 6, 1875.

SATURDAY, MAY 29, 1875.

ORIGINAL LECTURES.

CLINIC

OF PROF. D. B. ST. JOHN ROOSA.

Reported by J. M. HARVEY, M.D.

Delivered May 4, 1875, at the University Medical College, N. Y.

GENTLEMEN,—I want to recall to your minds the case of atrophy of the optic nerves, in a man who came here last week and confessed to very intemperate habits in the use of alcohol and tobacco. I made, by means of the ophthalmoscope, the diagnosis of atrophy of the optic nerves. You know the optic nerve enters the eyeball a little on one side of the centre. Its surface after entering the eyeball is called optic papilla or disk, and is a blind spot at all times; that is, no image is formed upon it; therefore, if we could imagine such a state of things as atrophy of this nerve-entrance only, while its fibres which pass into the retina are intact, you might well ask, how will there be any blindness? What difference would it make if the optic nerve-entrance be atrophied? Such a case has been lately attending at the Manhattan Eye and Ear Hospital. The ophthalmoscope shows not only whiteness of the papilla, but actual shrinkage of tissue and lessening in size of the vessels, with excavation of the disk, and yet the vision, since he has been treated for syphilis, which was the provoking cause of his optic neuritis and subsequent atrophy, has increased to the normal standard. From this entrance go out transparent fibres which make up a part of the retina. Now, if we have this optic nerve atrophied, and the fibres that convey impression to the brain become affected, then vision is impaired. A man may have considerable atrophy of the nerve-entrance, but so long as these fibres that pass out into the retina are not interfered with he may have very good sight; in the present case we found vision very much reduced, so that it was only about $\frac{2}{100}$ on each side, but there may be decided atrophy of the nerve-entrance and yet the vision be $\frac{2}{10}$.

We call this disease *amblyopia potatorum*, from drinking, or *amblyopia ex abusu*, from abuse of any of the stimulants or narcotics. It is usually a neuritis in its first stages. The treatment is, in the first place to abandon the habit which produced the trouble, and in the second place to stimulate the nerve. You remember we advised that man to give up the use of tobacco and alcohol, and to use strychnia. The object of the strychnia was to stimulate the vessels to produce such action as will fill up these little lateral blood-vessels of the disk which have become void of blood, for it is anæmia which causes this tissue to shrivel and lose its power of conveying impressions.

Atrophy of the optic nerve may be produced by very many causes, and I do not think true atrophy of the nerve is one of the frequent results of the

abuse of narcotics and stimulants. A man may get a blow on the back of the head which may cause congestion of the brain, and the blood in the vessels pressing upon the optic nerve may cause the circulation in the nerve to be diminished, or hemorrhage from these vessels may cause a destructive or injurious pressure. A tumor may arise from the base of the brain, or, as sometimes happened during the late war, a man may be shot in the head, the ball passing across the optic nerve; the result will of course be atrophy of the stump of the divided nerve. Any disease of the brain which produces pressure on the nerve or destruction of its continuity, if the pressure be continued long enough, will cause atrophy.

I was called a few days ago, by a member of the class, to see a young woman who had a chill and complained of pain in her eyes, and, taking my ophthalmoscope and looking in upon the eyes, I found she had acute inflammation of the optic nerve-entrance descending from the brain (neuritis optica descendens), and unless that passes away very quickly the tissue will be so pressed upon that atrophy will result. Acute inflammation of a nerve is not always followed by atrophy, however, for many cases of neuritis are recovered from without any marked changes in the nerve-tissue. Atrophy of nerve-tissue in one part of the body is exactly the same as in any other part. Why does not every one who uses tobacco in excess get neuritis and subsequent atrophy of the optic nerve? I cannot answer that question, any more than I can tell why all persons who use alcohol to excess do not die of delirium tremens. Some persons who use alcohol to excess live to old age; so also it can be said of some who use tobacco to excess: they live to old age with apparently no impairment of their organs. We do know, however, that the excessive use of tobacco and alcohol sometimes produces neuritis, and that by the entire abandonment of the habit a recovery is often secured.

There is just one thing to be said about the use of the ophthalmoscope in the diagnosis of disease. By many general practitioners it is considered a very complicated instrument. I grant that to understand the principles upon which its use is based requires a very considerable knowledge of optics, but, practically, it is a very simple instrument; it is simply a reflector by which to illuminate the back part of the eye, and a man may learn to make a diagnosis with its aid before he has mastered the principles upon which its use depends.

Case I.—This case (*strabismus convergens*) speaks for itself. This little girl has got strabismus or convergent squint. You will see that one eye runs past the optic axis so as to cause great deformity, and the images cannot fall upon the same spot in the two eyes; consequently if she sees with each eye there will be one image in one eye and another image in the other eye; but probably one image is suppressed or disregarded, and she sees only with one eye at once.

There is but one thing that will cure the strabismus, and that is an operation.

The mother says her child was not born with

squint, but that it occurred soon after birth. This is a very natural mistake, but nevertheless a mistake. The conditions for the strabismus existed at birth, although the squint did not show itself until the eyes began to be used on objects near the eye, or when the eyes were steadily fixed upon a near object. Convergent strabismus results from a shortened condition of the eyeball, and it occurs at a very early age, as soon as the patient begins to use the eyes on objects near at hand; and although it may be said persons are not born with squint, it is nevertheless true that they are born with that condition which produces this trouble. The shortness of the eyeball prevents the patient from being able to see distinctly at any distance, but such persons soon find that they can see more distinctly if they excessively converge the eyes, and in that excessive convergence one eye begins to shoot by the other, and then they have such a state of things as is represented in that diagram, the images not being received on corresponding parts of the retina. I examined this child's vision, and found it more defective on one side than on the other. This defect occurs as a consequence of the want of development of the eyeball,—hypermetropia. The operation for squint essentially consists in dividing the muscle and causing it to insert itself farther back on the eyeball, where it will have less power and the patient cannot converge the eyes so much.

The instruments necessary for a squint-operation are, first, one that will keep the eyelids open,—a spring speculum; second, an instrument that will hold the eyeball,—a pair of fixation-forceps; third, a pair of forceps to take up the conjunctiva; fourth, a pair of scissors with delicately rounded points, with which to cut through the conjunctiva and theca; fifth, a strabismus-hook for taking up the tendon; and sixth, a pair of scissors with which to divide the tendon.

The strabismus is so great in this case that the muscle will have to be divided in each eye.

[Operates.]

That is an operation, gentlemen, which all of you may easily repeat on the cadaver, and observe every part except the bleeding.

When this child began to squint, if it had been possible for her to tell her sensations she would have told you that she saw double,—one image with one eye, and another image with the other eye. This double vision is very annoying, as any one of you may know if from any cause you ever experienced it. In order to get rid of this annoying double vision the patient soon learns to suppress the image of one eye, and, as a result of this suppression, you will almost always find that the vision is better in one eye than in the other.

As the operation for squint consists in dividing the muscle and causing it to insert itself farther back on the eyeball, you may ask, why does not the squint return after the muscle has inserted itself and again become powerful? It will return in many cases unless the shortened condition of the ball be corrected by glasses that have the effect of lengthening it,—by a convex glass.

Case II.—This gentleman is a member of the class,

and he has done me and you a great favor by allowing his case to be presented before you for examination. Age 26; had trouble in ears thirteen or fourteen years. The gentleman says he went in bathing, and after coming out of the water he felt bubbles in his ears, and his hearing was impaired.

This was still-water bathing. In surf bathing there is great danger, from the force of the waves striking the membrana tympani and breaking it. There is always danger, in any kind of bathing, of water getting in the ears, soaking through the membrane, and setting up congestion and inflammation of the tympanic cavity. What this gentleman had was congestion of the tympanic cavity, caused by the presence in the ear of a large quantity of water which had soaked through the membrane. While bathing we have all had the experience of getting water in our ears, and we are all familiar with the boys' method of getting it out,—i.e., jumping on one foot until the ear is shaken dry.

There is but little if any impairment of hearing in this case, consequently he could have no suppuration of the middle ear, and what he is now troubled with is eczema of the external auditory canal. The great remedy for chronic irritation of the external canal is warm water three or four times a day, and next to that sulphate of zinc or alum. If you see the patient yourself, you might apply nitrate of silver in solution by means of a little cotton on a cotton-holder. The gentleman before us does not need any constitutional treatment. I should say that your class-mate was a perfectly healthy man, and that the eczema occurs from causes entirely local, and local treatment as suggested above will cure it.

ORIGINAL COMMUNICATIONS.

WHAT CONSTITUTES A LIVE BIRTH?

BY JOHN J. REESE, M.D.,

Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania.

THE question, What constitutes a live birth? has an important twofold medico-legal application. First, in its *criminal* relation to infanticide; and secondly, in its *civil* bearing to the transmission of an estate from a deceased wife to her husband, through issue born alive.

A very different answer to the above question would be given by the non-professional and the professional person. In the estimation of the former, life in the new-born babe is evidenced only by the full and active play of all the functions and organs of its body. If it has come into the world without exhibiting voluntary movements and without visible respiration (and consequently without the traditional cry), albeit having a pulsating umbilical cord, a throbbing heart, and a distinct pulse, he would probably pronounce that the child is not really alive,—that is, that it has not a separate, independent existence apart from its mother; but that it merely carries in its body the faint remnants of its former foetal life, which are now rapidly flickering away.

On the other hand, the professional expert will tell us that *any one* satisfactory evidence of life is sufficient to establish its existence, both physiological and legal.

Let it be premised that by the term *live birth* the law understands "the complete extrusion from the mother of a living child," with or without the severance of the cord. In the case of an alleged infanticide, where proofs of the crime can be obtained solely from the inspection of the dead body, the chief evidence of previous life is derived from the *hydrostatic test* of the lungs; and this, unfortunately, is not always reliable. But in the civil case, which has reference to the transmission of an inheritance through a child born alive, the proofs of the live birth can readily be furnished by the attending physician, as also by other witnesses who may have been present at the delivery. In this latter case, no post-mortem examination is necessary, since the other proofs of life are far more satisfactory and complete.

It is to the latter aspect of the case (the civil) that I propose briefly to direct attention in the present article. By the old English law which has been in operation for centuries, and which is recognized at the present day in several of the United States, the husband of a deceased wife who dies seized of an inheritance acquires a life-interest in such inheritance, *provided* there was issue born alive. In such a case, the husband is technically said to inherit by "tenancy of the courtesy of England;" he is called "a tenant by courtesy." In the State of Delaware, which still retains the old English law on this subject, an important case lately occurred in which this principle was involved. The case (*Stout vs. Killen*) was tried in Dover, May 4, 1875, before the Superior Court of Delaware, the Hon. Judge Gilpin presiding, on a writ of ejectment brought against the defendant for the recovery of a property that had passed into his possession, as "tenant by courtesy," on the death of his wife some years previously, through an infant alleged to have been born alive, but which survived but half an hour. The plaintiffs (the wife's heirs-at-law), on the other hand, affirmed that the child was not born alive, and, consequently, that the estate did not pass to the husband. Here the whole case virtually turned upon the question of the live birth, and this, of course, involved the important query of what constitutes a live birth.

Two highly respectable physicians who attended the lady in her confinement testified that the labor was a protracted and difficult one, requiring the use of the forceps. The patient, moreover, had convulsions. The child was large and fully developed, the chest was rounded, the lips were ruddy, the general color of the body natural (not livid). The umbilical cord distinctly pulsated for about twenty minutes after complete delivery, when it was cut. The heart and temporal arteries beat distinctly all this time, *and continued so to do for five or six minutes after the severance of the cord*. There was no perceptible respiration, and of course no cry; nor were any spontaneous movements of the body observed. All the usual restorative measures were practised, but without effect; all evidences of life

ceasing about half an hour after the birth. Both the physicians testified that they regarded the child as born alive.

As one of the expert witnesses called for the defence, I had no difficulty whatever in giving an affirmative answer to the question, Was this child born alive? and in this I was ably supported by Prof. Penrose, of the University of Pennsylvania, and also by several distinguished physicians of Dover; and I based my opinion upon the following data:

It has long been a settled point in law, founded upon a recognized physiological fact, that respiration (or crying), although an important evidence of live birth, is by no means the *only* evidence. It is admitted that a child may be born and die without breathing; so that the wilful destruction of such a child is just as much murder as if it had cried lustily and moved its limbs vigorously. What the law requires in such cases is simply *proof of life*, not proof of respiration. Now, if life can be proved by other means than by respiration, the law's demands will be satisfied. I think we must admit that the pulsation of the child's heart and arteries, after its full extrusion into the world, and especially after severance of the umbilical cord, is a good evidence of life. Certainly the heart does not beat nor the pulse throb in a dead child; and there is no alternative between a dead child and a living one. Again, there can be no pulsations in the funis of a dead child; we all know that one of the surest signs of death in a child during parturition is the cessation of the pulsations of the cord. Furthermore, the redness of the lips and the healthy (not livid) appearance of the body, together with the rounded condition of the thorax, were highly suggestive of a feeble, though imperceptible, respiration.

The only attempt on the part of the plaintiffs to rebut this testimony was by alleging that this (admitted) life in the child was merely the remains of its intra-uterine life,—“a prolongation of its foetal life,”—extending its influence beyond the period when the child was separated from its mother, and galvanizing, as it were, what was in reality a lifeless mass of flesh and bones! This latter doctrine we hold to be untenable. The child was either alive or dead at its birth. Confessedly it was not born dead. No one would presume to bury an infant with its heart and arteries beating, and with a natural appearance of its lips and skin, even though it did not visibly breathe. Such a “prolongation” of life was, by the plaintiff's counsel, likened to the *momentum* imparted to a piece of machinery and retained for a while after the impelling power had been withdrawn. Here the motion might, in truth, be said to be merely the “remnant” of the antecedent power, and one that must of necessity soon come to a stop. But there is this immense difference between the two cases, which, at first sight, might seem so analogous: the machinery is but dead matter, subject merely to the laws of inertia; whilst the infant is endowed with a living organism capable of maintaining its own existence, provided it be furnished with the conditions of life. This

idea is further sustained by the well-known fact that many infants born apparently dead, and remaining for some time in this state, do actually revive and continue to live. I admit that in a very important sense its extra-uterine life was a "prolongation" of its foetal life, but precisely in the same way as it is in all our bodies. Certainly there is no *new* life imparted to a child after it is born. The principle of life mysteriously contained in the vivified germ is the same life continued on in the matured man, only developed. The life of the oak of a century's growth is essentially the same life that evidenced itself in the first swelling of the acorn beneath the soil. All we contend for is *life*,—not the amount or quantity of life, but the fact of life; and this latter, we think, was abundantly established by the evidence.

To discuss metaphysical subtleties on the subject of life before a court and jury, and to propound learned theories on the difference between intra- and extra-uterine life, in cases of this kind, may suit the purposes of ingenious counsel, but only serves to befog and confuse the plain common-sense jurymen. Besides, the rulings of the courts, both in England and in this country, have settled the question, in deciding that respiration (or crying) on the part of the new-born child is not required to establish the proof of a live birth, provided there are other evidences. Undoubtedly, the best physiological test of life is the pulsation of the heart. It is a more satisfactory proof than respiration, inasmuch as, in ordinary cases, life terminates in the heart, and not in the lungs or brain, since the heart is found to be beating some time after all evidences of breathing have ceased. The well-known experiments of Sir B. Brodie on animals also confirm this assertion. We do not pronounce a dying man to be *dead*, however feeble or inaudible his respiration may be, so long as we can feel or hear the throbbings of his heart; certainly we would hardly think it right to entomb such a person. And what is true of the man in this regard may be equally affirmed of the new-born infant.

This Delaware case may be regarded as a leading case in this country, and the finding of the jury (which was for the defendant) may be considered as establishing an important precedent in cases of a similar character. These cases, I may remark, are not of frequent occurrence; only a few have been reported in the English courts, and I can find but a single authenticated one in the law reports of the different States of our own country: that of *Garwood vs. Garwood*, which was tried in California in 1865. (Wharton and Stillé's *Med. Jurisp.*, 1873, vol. ii. p. 1083, *note*.)

In this latter case there were several circumstances in which it closely resembled the one in question: thus, the labor was protracted; the child did not breathe after it was born, but the umbilical cord and the heart beat for about fifteen minutes after extrusion from the mother; and the heart continued to pulsate two or three minutes after the severance of the cord. Besides, there were muscular movements of the hands and feet immediately after delivery.

In one of the English cases (*Fish vs. Palmer*) the court took the very extreme view that a mere twitching or tremulous motion of the lips of the child on its being put into warm water (and lasting but for a few moments) was sufficient to establish a live birth; and this without any observed pulsations in the heart or in the umbilical cord, or any sign of respiration. It seems to me that this is stretching the doctrine rather too far, inasmuch as the very slight contractions of the mouth that were noticed might be accounted for from the muscular irritability that had not yet been lost, but which, as is well known, continues for some time after death, and usually until cadaveric rigidity sets in. This *irritability* is believed to be an inherent property of the muscular tissue, and so long as it continues it may be excited by any external stimulus, such as cold, heat, electricity, etc., producing muscular contractions. But this sort of motion is a very different thing from the active movement of the blood in the heart and the umbilical vessels, produced by the regular rhythmic contractions of the child's heart, and kept up for half an hour after the complete extrusion of the child into the world.

Another English case (*Brock vs. Kelly*, Taylor's *Med. Jurisp.*, Am. ed., 1873, p. 625) came before Vice-Chancellor Stuart in 1861, and his decision confirms the views above expressed. Here "there was slight pulsation in the cord after separation from the mother, showing a feeble but independent circulation; there was no other indication of breathing than an arched state of the chest." In this case Dr. Tyler Smith considered that the beating of the umbilical cord "was a physiological proof that the child in question was not born dead;" whilst Drs. Lee and Ramsbotham, on the other side, testified that "nothing less than breathing could, in their judgment, establish the fact of a live birth." According to them, a child must breathe before it can be said to possess independent life. The vice-chancellor decided that proof of breathing was not necessary, and held that the pulsations of the cord, observed after birth, afforded sufficient legal evidence of a live birth.

That the above decision was based on sound physiological reasons is further shown by a case reported by Dr. Seale (*Am. Journ. Med. Sci.*, July, 1870, p. 278). He induced labor in a woman by means of ergot at about the seventh month of uterogestation. "A large child was born, after some difficulty, but it did not make the slightest effort to breathe; there was distinct pulsation in the cord." Was this child living, or dead? According to Drs. Ramsbotham and Lee, it was not alive. But the result proved the fallacy of such an opinion; for on subjecting the child to the action of hot and cold water, etc., "violent spasmodic contraction of the diaphragm took place, which continued for five minutes. The cord was now severed, and a little blood was allowed to escape from the foetal end; the tongue, which had fallen back, was drawn forward; a sudden spurt of a drachm of blood flowed when the constriction was relieved, and the child began to breathe very feebly, and so continued to breathe at long intervals. The heart beat very

feebly; the pupils widely dilated, and did not respond to light. This condition lasted one hour, when the child ceased breathing; the death being undoubtedly caused by compression of the brain."

I think, then, that the above-mentioned cases sufficiently sustain the position that respiration is *not* necessary to establish a live birth. As M. Bouchut justly remarks, "Apparent death succeeding to birth, and characterized by the presence of a beating of the heart and an absence of respiration, is *only a diseased condition* of the new-born child (*atelectasis*), and whether it is cured of this or dies, it is living, although it has not been breathed." (*Gaz. des Hôp.*, 1855, No. 124.)

In the California case above alluded to, the opinion of the judge, as expressed in an able charge, was "that in the case in question it should be held that the beating of the heart was spontaneous, and that the child was born alive."

ON THE CAUSE AND PREVENTION OF TYPHOID FEVER IN SCHOOLS.

BY JOHN L. LECONTE, M.D.,

Late Medical Inspector U.S.A.

IN the beginning of January, 1875, I was requested to inspect St. Mary's Hall, Burlington, N.J. (a justly renowned school for the education of young ladies), in order to ascertain the cause of an outbreak of typhoid disease which had occurred some weeks before.

The cause, as is usual in such cases, was easily discovered, and the means for its removal and for the prevention of its recurrence readily determined. The suggestions which I made have been fully carried out by the trustees, and I in consequence gave a certificate stating that the necessary sanitary improvements had been made, and that there was no danger of a recurrence of typhoid disease.

These facts having come to the knowledge of several friends who are interested in sanitary science, I have been requested by them to prepare a short account of the causes which led to the development of the disease, and the results of the measures adopted for its suppression.

By the kind permission of the Board of Trustees of the school, I am now authorized to do this, and I hope that the lesson conveyed by these very simple observations will not be lost upon other institutions which are liable to similar misfortunes.

At the time that the hall was built, the water-supply was obtained from two cisterns, constructed of heavy wooden curbs, lined with brick and coated with cement. They were floored with timber, and descended below the level of subterranean drainage, by which spring-water would enter. In order to place the floor properly, a hole was cut in each to prevent the pressure of the spring-water. After the timber floor was fixed permanently, these holes were plugged, the plugs rising above the masonry bottom of the cistern. The water-supply was thus made to depend entirely upon the river; and had these arrangements continued without change I am

confident that no typhoid disease would have occurred.

A year later, without the knowledge of the authorities of the school, the plugs at the bottom of the cisterns were removed. This was a capital error, but would, perhaps, have been insignificant in its results had it not been supplemented by a second, the pernicious effects of which recently manifested themselves. A year or eighteen months afterwards (1871), privy-vaults were dug outside of the building for the reception of the excreta, which up to that time were received in boxes and removed every few days.

One of these privy-vaults was most inconsiderately placed about eight or twelve feet from the water-cisterns, which, as is mentioned above, had been opened to the influence of subterranean drainage. This privy vault seems to have been constructed with all the care usually exercised in the building of such receptacles,—bottom and sides nine-inch brick, laid in cement, heavily and carefully covered with cement, and arched over above.

The result was naturally what any student of sanitary science would have predicted. After a certain lapse of time (in this instance three years) the soil around the privy-vault became poisoned with the effluvia and infiltrations, and the water-supply in the cisterns thus became contaminated.

Having thus ascertained the cause of the disease, the remedy was, of course, evident, and of easy application. I was glad to find that it had been already recommended by the physicians of the establishment, Drs. Pugh and Gauntt, who, with admirable judgment, had, on the 18th of December, 1874, advised the disuse of the cisterns. It is a significant fact, as showing the correctness of my view that the contiguity of the privy-vault to the cisterns was the *sole cause* of the disease, that ten days after the water had been, by the advice of the physicians, drawn directly from the river, the last case of typhoid fever occurred, and since that time (28th of December) the school has been quite free from all similar disease.

One or two interesting facts were developed during my examination, which are worthy of mention. Although numerous cases of typhoid occurred among the girls, and a smaller proportion among the teachers, *not a single one* of the servants was affected. On inquiring of the latter whether they drank water, the reply was that they used only tea and coffee, and almost never drank between meals. The girls, on the contrary, like all children, are frequently thirsty, and drink often at intermediate hours of the day. The water consumed by the servants was, therefore, boiled, by which process the molecular activity of the putrescent matter was checked, and its power as a zymos was destroyed. No more admirable instance of the efficacy of this simple remedy for the purification of contaminated water can be found.

I asked the Rev. E. K. Smith, D.D., the principal of the school, what had been the fate of those pupils who did not use tea, coffee, or milk, but drank water exclusively. He told me that, after careful inquiry at the different tables in the refec-

tory, he ascertained that of seven absolute water-drinkers six had been attacked with typhoid.

In conclusion, I would invite the attention of my colleagues in the medical profession, and the governing authorities of schools, both public and private, to the ease with which all similar outbreaks of disease may be prevented, or, as in the present instance, speedily removed, by seeking scientific advice.

The following recommendations, if adopted, would, in most cases, prove effective.

1. Before the plans of the building are fully matured, let an expert in sanitary studies be employed to give directions to the architect in all that relates to ventilation, drainage, and water-supply.

2. After the building is completed, no alterations should be made affecting these three essentials of good hygienic condition, without the suggestion of a practised sanitarian.

3. There should be stated inspections, say twice a year, of each institution by some sanitarian of acknowledged merit, who, after close examination and the correction of any defect, would give a certificate to be published in the circular or announcements of the school.

4. On the outbreak of any zymotic disease in the institution, the advice of a sanitarian expert should at once be obtained, in order that means may be taken for its restriction, suppression, and prevention.

I may be permitted to add that at the last visit I made to St. Mary's Hall I found the sanitary condition perfect; and I cannot too highly commend the liberal manner in which the trustees have carried out the suggestions contained in my report, thus insuring, in my opinion, the health of the scholars confided to their care.

TRANSLATIONS.

CASE OF HYPERHIDROSIS UNILATERALIS.—Dr. Pokrofsky reports (*Berlin. Klin. Wochen.*, No. 13, 1875) the following case, which presented itself recently at Prof. Botkin's clinic in St. Petersburg. The patient, a man, presented the following appearances whenever he began to eat. The right side of the face, the greater part of the forehead, a part of the region about the shoulder, and the entire neighborhood of the temple, the ear, a little strip behind the ear, and the upper part of the neck on the right side, became decidedly red and covered with profuse perspiration. This collected gradually in large drops, and if not wiped away would run down over the body. The right half of the breast, the right arm and leg, were, during eating, somewhat warmer and more moist than the same parts on the left side. During the perspiration the right temporal artery became prominent, and pulsated markedly. Pulsation was noticeable also on the inner surface of the cheek. The pupils contracted equally; there was slight asymmetry of the face and tongue; the right eyelid could not be raised quite as high as the left.

During eating the temperature rose 0.2° to 0.4° , centigrade, in the right armpit, and other variations showed themselves later. Irritation of the sympathetic by the induced current during the patient's quiescence produced no effect similar to that brought on by eating;

but if the patient began to eat while the stream was passing, the usual symptoms were observed. Faradization of the cervical sympathetic during eating caused rapid diminution of the redness, and cooling of this side. Various investigations showed an apparently normal condition of the nervous system in general. However, electro-sensibility of the right cheek was diminished. The hearing, which was imperfect, was worse on the right side. Examination of the abdominal organs showed enlargement of the liver and spleen.

The increased secretion of sweat dated back to a fever from which the patient suffered in 1844, and which was accompanied by parotitis of the right side. X.

A MASCULINE MAIDEN.—An individual twenty years of age, who had always been regarded as a girl, and whose social status was that of the sex, discovered his mistaken identity at the age of eighteen. For two years he kept his secret, but, wishing to marry, he was of course obliged to change his social position.

The examination which he was obliged to undergo resulted in developing the following appearances as to the sexual organs. The scrotum, divided in the middle, contained both testicles, and on the left a scrotal hernia. When the penis was erect it was invisible while the thighs were closed, but when these were opened it could be seen pointing backwards. This resulted from the fact that the prepuce was closely attached to the scrotum. It lay in the raphé of the scrotum, not like a protuberance from the latter, but embedded in it, and, in fact, in such a manner that the frænulum was fastened to the skin of the scrotal juncture and to that of the perineum. The normal and erectile glans was quite free. The individual in question admitted having twice completed coitus.—*Centralblatt*, No. 16, 1875. X.

VARIOUS METHODS OF TREATING WOUNDS.—The *Centralblatt für Chirurgie*, April 24, contains abstracts of papers on this subject by various writers, whose views are essentially as follows:

Dr. Ollier (*Comptes-Rendus*, tom. lxxx., 1875) recommends dressings of cotton with immovable occlusion. He says that although, when the wadding is removed, quantities of vibrios and other low organisms are discovered in the discharges, yet no evil comes of this.

The same pus, however, injected into the cellular tissue of a dog brought about gangrenous phlegmons. This shows how tolerant the surface of the wound becomes to the presence of this pus. Should daily removal and cleansing of the wound be practised, some fine granulations must almost inevitably become denuded, and an absorbing surface for the pus be made.

This explains the rise of temperature which follows each renewal of the dressing when this is frequently carried out. On the other hand, if the immovable and occlusive wadding bandage be retained in position until it has to be removed on account of the accumulation of purulent matter, the temperature of the patient will fall after the dressing is changed. Ollier has had remarkable success with the immobile and occluded dressings, and believes them the most appropriate in severe wounds, etc., and also that erysipelas is not so frequently met with.

Marc Sée (*Rev. de Thérap.*, 1875, No. 2) uses irrigation by means of weak alcohol. Wounds treated in this way take on new action, and, although proud flesh is apt to show itself, laudable pus makes its appearance, and the wound thus treated rapidly assumes a healthy granulation, and tends towards rapid recovery.

Nussbaum (*Aertsl. Intelligenzblatt*, 1875, No. 5) gives statistics from the surgical clinic at Munich, in support of Lister's method of treating wounds. Its figures certainly show a marked falling off of mortality subsequent to the use of salicylic acid. X.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MAY 29, 1875.

EDITORIAL.

CONTRIBUTORS—PLEASE TAKE NOTICE.

IT may seem a matter of very trifling importance what cognomen is applied to a plant, animal, man, or paper. The old saw, it is true, affirms that a rose will smell as sweet with any other name; but in spite of this there was good sound sense, though not much worldly wisdom, in the brain of the young American who, seizing his nursing-bottle in one hand and the family carpet-bag in the other, indignantly left the house because his father and mother had finally settled upon Obadiah as a suitable title for him—their cherished first-born.

There really is much in a name,—much it may be that attracts, much it may be that repels; and because medical authors seem so often devoid of principle in their choice of titles we propose to call attention to the subject to-day.

In a novel or an article for a popular magazine, not only the title but even the very names of the characters play no small part in the achievement of success or in the shipwreck of failure. Any one conversant with Dickens's works knows the infinite appropriateness of the names of those personages whom his imagination has called into being. Uriah Heep "coming out strong" under difficulties is inconceivable, whilst for Mark Tapley to have taken upon himself the character of Bill Sykes would have been a violation of all the proprieties. Since the death of Mr. Dickens it has been discovered that he always selected his names with much care and thought, often rejecting many until he got the right

one. The first lesson we would like writers of medical papers to learn would be that the names of their papers should be selected with care and thought.

In a popular magazine article, if it be possible, a name should always be chosen of such character as to excite curiosity. From Victor Hugo's "L'Homme qui rit," to Dr. Mitchell's "Wear and Tear," this principle has underlain the choice of all successful titles.

A medical journal is read, in theory at least, for knowledge. Approaching with an insatiable appetite for this valuable commodity, its reader asks no condiment to whet his ardor, but only desires to be shown at once where is the morsel his soul craves. Hence the principle that the title of a medical article *should express as briefly but as plainly as possible the essence of the paper.*

When we started this editorial we expected to nurture it to full maturity; but just at this point the postman brought us the following article from Dr. Billings, of the Army Medical Library; and, as the lesser should always give way to the greater, we place here his article as received.

"ON TITLES OF ARTICLES IN MEDICAL JOURNALS."

"A medical journal is a library on a small scale, and, like it, is usually a combination of a treasure-house and rubbish-heap.

"One object which the editor and the librarian should keep in view is the separation of the refuse from the jewels as far as possible, and for this purpose much depends upon the system of labels or titles. If it were fully appreciated how much of the practical value of journal articles, and the probability that the latter will be referred to by those seeking information, depends upon the title, it seems to me that more care would be taken by both authors and editors to see that the subject of the paper is properly described by its heading.

"It is very seldom that the physician will find, in examining the last number of his medical journal, any article that bears directly upon his work then on hand. It may be months or years before he will need to refer to it, and the possibility of his doing so will depend much on the index, which last depends upon the titles.

"For about ninety per cent. of journal and transaction articles the title is the most important part, as showing what one should avoid reading; and if a good descriptive title cannot be made, there is reason for suspecting that the paper is not worth printing.

"What information is given by such titles as the following: 'A Remarkable Case,' 'Singular Malformation,' 'Paralysis from Injury,' 'The Fever of 1852,' 'The Case of Mary Dobbs,' 'The Trial of Dr. Jones,' etc.?

"How much reference will probably be made to papers headed 'Pathological Observations,' 'Therapeutical Memoranda,' 'Notes of a Practitioner,' etc.?

"Again, titles are often incorrect. 'A Case of Gastrotomy,' for instance, may be a case of Cæsarean section, colotomy, laparotomy, or true gastrotomy.

"For the sake of bibliographers, librarians, and the writers and teachers of the future, I would request that each contributor to the great storehouse of medical literature shall label his packages properly and distinctly."

UNIVERSITY OF MICHIGAN.

THE Legislature of Michigan has just passed the following bill:

"SECTION I.—The people of the State of Michigan enact: The Board of Regents of the University of Michigan are hereby authorized to establish a homœopathic medical college as a branch or department of said University, which shall be located at Ann Arbor.

"SECTION II.—The Treasurer of the State of Michigan shall on the first day of January, 1876, pay out of the general fund, to the order of the Treasurer of the Board of Regents, the sum of six thousand dollars, and the same amount on the first day of January of each year thereafter, which moneys shall be used by said regents exclusively for the benefit of said department."

If the Regents had some time since requested of the Legislature sufficient money to put the medical department upon the same basis as Harvard, would not their request have been granted?

CORRESPONDENCE.

NEW YORK, May 14, 1875.

THE venerable Alonzo Clark still continues his weekly clinics at the College of Physicians and Surgeons. These are maintained with great regularity throughout the year, with the exception of a couple of months or so in the summer, and always attract quite a large number of students.

What strikes a casual visitor most at first is the imperturbable gravity of the old Professor. This characteristic was well shown, for instance, at the clinic on Thursday, when a lad presented himself complaining of a pain in his stomach, which he, afterwards, however, concluded was in his chest.

The boy was not sufficiently intelligent to give a satisfactory account of himself, and, after he had been put through a course of cross-questioning, in which his answers were contradictory enough to have driven a lawyer to distraction, but which never for a moment ruffled Dr. Clark's dignified serenity, a careful physical examination of the abdominal region was made. At its conclusion, the learned Professor announced, with the same air of importance as though he had discovered the presence of cancer of the pylorus or a perityphilitic abscess, that unless the patient was suffering from intes-

tinal colic he was at a loss how to interpret his symptoms. During all this time not the faintest suspicion of a smile was ever discoverable upon his placid features.

There were no cases of special interest brought before the class on this occasion. The first after that just spoken of was one of dyspepsia, in an artisan, characterized by great pain and uneasiness, free eructations and occasional bilious vomiting after eating, and a constant bad taste in the mouth. As he complained of excessive palpitation during these attacks of pain, an examination of the heart was made, when it was found to be enlarged; the præcordial dulness extended laterally an inch farther than normal, and an aortic murmur was also detected. There was no history of rheumatism. The patient was put upon ten grains of pepsin by starch and five drops of the strong nitromuriatic acid in as many tablespoonfuls of water, immediately after meals. No treatment was suggested for the cardiac trouble, except that he should observe great care in his habits of life.

The last case presented was one of spasmodic asthma. The patient was a cigar-maker by trade, and had suffered from this affection for eleven years. The attacks usually came on in the night, towards morning, and often lasted twenty-four hours. Their average frequency was about once a week. The last one had occurred early that morning, but had been less severe than usual. The urgent dyspnœa had now passed away, but the characteristic whistling, unaccompanied by mixed râles, could still be plainly heard all over the chest. In this case it was especially prominent in inspiration. Prof. Clark stated that asthma might be due either to emphysema of the lungs, or enlargement of the right side of the heart. When emphysema was present, it could usually be detected on percussion, in one or both subscapular regions. In this case there was no cardiac hypertrophy, and neither could emphysema be very clearly made out, though the vesicular resonance on the right side, behind, was rather greater than that on the left. No mention was made of spasmodic asthma as a purely neuropathic affection, without necessarily involving any appreciable lesion. He regarded the painful dyspnœa in asthma as due to two causes, congestion of the mucous membrane, and spasmodic contraction of the smaller bronchial tubes.

The treatment resolved itself into two parts, that of the paroxysm, and that of the halix. For the former he considered the inhalation of the smoke of stramonium-leaves, either in the form of cigarettes or by a pipe, the most efficient remedy. If a pipe was used, it was better for the patient to blow the smoke first into a hat, and then breathe it in, in order to avoid the swallowing of acrid oils. The inhalation of the fumes of nitre-paper, ether, and chloroform were also employed by some. Another class of agents afforded relief by producing nausea, and of these lobelia was most in repute. Dr. Clark did not allude at all to the use of nitrite of amyl in this affection. The only remedy for the halix to be considered, he said, was the iodide of potassium,

and this was an exceedingly uncertain one. When this failed absolutely, the only chance for a cure was in a change of locality; and it was a remarkable fact that there seemed to be some place or other where every asthmatic could be entirely free from his troublesome attacks. Colorado has some reputation in this respect just now; but, though it may suit some, there are vast numbers of others upon whom its climate would have no effect whatever. Salter had found that benefit was often derived from a residence in the smokiest part of smoky London; and, acting on this suggestion, Dr. Clark had sent some of his patients to Pittsburg. But he found it would not do: there was too much sulphur in the air there. He then related an instance of both the members of a business firm being affected with asthma. As their manufactory, however, was in Newburgh and their sales-rooms in New York, and as one gentleman never suffered from its attacks while in the former place, and the other in the latter, they were thus enabled to attend very satisfactorily to the management of their business. The only rule was for a patient to go from place to place until he found a locality where he was free from the disease.

At his clinic at Bellevue Hospital, on Saturday, April 24, Prof. Jacobi again brought before the class the case which was reported in our last letter as one of *scleroderma*, and said that after a more careful study of its history and clinical features he had arrived at the conclusion that it ought more correctly to be considered a case of true atrophy of the skin. The disease commenced about the chest, where there was still some discoloration in *plaques*, but new adipose tissue was forming there, and there was now decided improvement in this part. The treatment had consisted of cod-liver oil and Fowler's solution. He ascertained that the younger child was not suffering from the same affection, as stated by some of the family.

A great deal of talk, and not a little indignation, have been excited here by a recent action of the Board of Managers of the Presbyterian Hospital. At this institution the appointments of visiting physicians and surgeons are for one year; but it has always been understood that each of the staff would be annually re-elected during "good behavior." Now, however, the Board have suddenly dropped four of the physicians (one of whom at the time was prostrated by a dangerous attack of typhoid fever), and elected four others, generally acknowledged to be less competent for the position. Some feeling is expressed against the latter gentlemen for accepting the appointments under the circumstances. As is so often the case, the *deus ex machina* in this matter proves to be a woman. The only offence of the physicians removed, so far as we have been able to ascertain, is that they were not altogether acceptable to her serene highness the matron of the hospital, who, it seems, is permitted to ride rough-shod over both doctors and directors.

There appears to be something wrong about the management of the Presbyterian Hospital; for, with elegant and commodious new buildings, constructed on the

best modern sanitary principles and in one of the finest situations in the whole city, the institution has never been a popular one. While it must have ample capacity for between one and two hundred patients, the average number, we have been told, is only *twenty-four*.

Some hospitals and asylums in the government of which the ladies have a controlling influence seem as bad as church choirs for "unpleasantnesses."

The annual report (just issued) of an institution in the administration of whose affairs there has never been any lack of harmony, and whose direction is mainly, as it ought to be, in the hands of medical men, now lies before us. It is that of the New York Free Dispensary for Sick Children, the only institution of its kind in the city, and which, though still in its infancy, is already acknowledged to be one of the important charities of the metropolis. It was started four years ago, by Dr. B. F. Dawson, who is still its President, and to whom its present usefulness and prosperity are almost entirely due. During the first year of its existence 1989 patients were treated at the Dispensary; during the second, 2672; during the third, 3323, and in the fourth, 4858. This continuous increase shows that the institution has ministered to a real need in the community, and that greater and greater demands have been made upon it as it has become more widely known. Its financial affairs have always been managed with ability and economy. When the dispensary was first proposed, \$465 was collected among a few friends to start it with. Now the treasurer's report shows a balance of over \$6000, notwithstanding the annual expenses have increased to nearly \$2000. All the funds for its support with the exception of \$300* have been contributed by the generosity of friends, and an annual ball at Delmonico's, which is looked forward to with delight by the fairest of the descendants of the Knickerbockers, is now one of its principal sources of revenue. No salaries are paid by the institution, not even a druggist's; the prescriptions being put up, at a reduced rate, by a reliable apothecary in the vicinity. It is proposed, as soon as practicable, to establish a hospital in connection with the dispensary, as there is now only one real child's hospital in the city,—St. Mary's,—an institution of the Episcopal Church, whose capacity is but twenty-six beds.

A short time ago, a certain Dr. Lambert read a paper before the Liberal Club on the "Special Articles of Food adapted to the Nutrition of the Brain, and the Methods of Cooking them." Preparatory to this he invited some of his friends to a banquet, which is thus taken off by one of the daily papers: "Last evening a party of gentlemen ate a 'brainial' dinner at Jones' restaurant, in Broadway, their host being Dr. T. S. Lambert. Mr. James Parton and about twenty others more or less well known sat around the board and nourished their brains to a somewhat alarming extent. The waiters grinned from ear to ear when they served the food, for not one of them had ever dreamed of a din-

* Appropriated by the Legislature.

ner beginning with toasted crackers and cheese and ending with boiled custard and buttermilk. The 'brainial' qualities of toasted cheese have long been known to scientific men, and nearly all the members of the Liberal Club are passionately fond of boiled custard, which, as is well known, contains over ninety per cent. of phosphorus, and will readily burn if rum be poured over it. Dr. Lambert lectures to-night on 'Brain-Building,' and it was to raise the intellects of his audience to a high place that he gave this exhibition of encephalotropophagy, or brainial food. Such a dinner will do occasionally, but is dangerous if too often indulged in. The human brain is about eighty per cent. water, and if it be stuffed with the sublimations of cheese, oysters, codfish, tripe, calves' brains, oat groats, and boiled custard, it becomes a powerful battery, a perilous magazine, liable at any moment to explode, to the great detriment of its owner and the surprise of bystanders. By the time the sixth course, which consisted of stewed tripe and green peas, was reached, the excitement became fearfully intense, and with the calves' brains the feast became almost an orgie. The forehead of the Pantarch grew four inches higher with the great pressure from within upon the convolutions, but happily the ganglion where oatmeal becomes universology was not affected in any marked degree. The parietal bones of a great Comptist separated, and the coronal suture widened quite perceptibly. Around the brow of a mighty Spiritualist there was a marked nimbus, where the escaping phosphorus ignited upon coming in contact with the oxygen of the air. It was singular in the extreme to watch the oatmeal rising to the brain; to see the subtle poison of the boiled custard turn a man into a demon of ratiocination; and as the fiery buttermilk mounted to the intellect and hurled the reason reeling from its throne, the beholder was fain to acknowledge that the gods are just, and of our pleasant vices make instruments to plague us."

Two suits for alleged malpractice have just been decided in a way that shows a very fair amount of discernment on the part of the juries, as juries go. The first has been argued for several days past in the Supreme Court, before Judge Van Brunt, and was that of Edward P. Doyle against the New York Eye and Ear Infirmary and Dr. Richard Derby, one of our well-known ophthalmic surgeons, for \$100,000 damages for the loss of his eyesight. The patient was suffering from purulent ophthalmia, and left the institution while still under treatment, and before sight was destroyed. The jury were out but ten minutes, and rendered a verdict for the defendants. The other suit was brought against Augustus McCollom, a person who has been practising dentistry without any diploma. It appears from the evidence that the plaintiff, while having some teeth filled by him, received considerable injury by his unskillfulness. Alveolar abscess ensued, and this resulted in tetanus, which nearly proved fatal. In this case, also, the jury was absent only about ten minutes, and then returned a verdict for the plaintiff; damages, \$435.

PERTINAX.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 11, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

Lungs from a case of emphysema.

DR. F. P. HENRY presented the specimens, and read the following history:

"Virginia S., æt. 24, was admitted to the Episcopal Hospital on September 27, 1874. Her illness, which has lasted about a year, began with a chill, followed by pain in the left side, cough, and swelling of feet and legs. She suffered from *chills and fever* during the entire summer.

"On admission, she presented the following symptoms and signs: Decided emaciation, dull expression of countenance, pallor, and profuse perspiration night and day. Sputa copious, tenacious and yellowish, and emit a faint, disagreeable, sickening odor. Flatness over the entire left thorax up to the supra-scapular region, and to a corresponding line in front; above that point, dullness. Respiratory sounds absent in the region of flatness. In the region of dullness there is a high-pitched, almost musical sound, attending expiration; this sound is prolonged, and is heard much less distinctly in front. The inspiratory sound in the region of dullness is bronchial. At the right apex there is a blowing expiratory sound, and dullness on percussion. Below, the resonance and respiration are normal.

"The heart's apex-beat is under the right nipple.

"The decubitus is constantly upon the left side; any attempt to lie upon the right side invariably brings on an attack of coughing, which does not cease until the original position is resumed.

"There is too great an amount of œdema upon the left side to make it possible to decide whether there is any bulging of the intercostal spaces. In the early part of October, measurement showed the left semi-circumference of the thorax to be an inch greater than the right.

"The treatment of the case was at first purely medical, and consisted of measures to promote absorption of the effused fluid, the nature of which at that time could not be determined with certainty.

"On November 13, the fluid having in the mean time increased in quantity, I requested the attending surgeon, Dr. Packard, to perform paracentesis. This was done at the eighth interspace, and three-fourths of a pint of pus was withdrawn by means of the aspirator. I was surprised at the result, as it was evident there was a much greater amount of fluid in the pleural sac. The position of the heart remained the same, and no expansion of the lung could be detected. Nevertheless, there was a decided improvement in the general condition of the patient after the operation, and her respiration was free. This improvement was of not more than a week's duration.

"On December 19 I tapped in the seventh interspace, and removed four pints of pus with the aspirator. The improvement was this time somewhat more permanent, but about January 1 the unfavorable symptoms began to return. The dyspnoea became more urgent, the cough more troublesome, and the sweating more profuse, in spite of large doses of belladonna, which had previously held it in check. At this date the patient was taking thirty ounces of milk-punch (one-third whisky) and sixteen grains of quinia in the twenty-four hours.

"January 3, 1875, morning.—Temperature, 98½°; pulse, 100; respiration, 28.

"Evening.—Temperature, 99°; pulse, 98; respiration, 26.

"January 4, morning.—Temperature, 101½°; pulse, 108; respiration, 40.

"This sudden increase in pulse, respiration, and temperature may be attributed to agitation of mind at the prospect of another operation. On this day Dr. Ashhurst, the attending surgeon, tapped in the eighth interspace, removed five quarts of thick, greenish-yellow pus through a trocar, and introduced an india-rubber drainage-tube.

"Evening.—Temperature, 100¾°; pulse, 116; respiration, 44. Since the operation about a pint and a half of pus has drained away. The air which passes in and out of the pleural sac, with a loud rattling noise, at each respiration, renders it impossible to determine whether the lung has expanded to any extent.

"January 5.—Feels better. A.M., pulse, 94; temperature, 98°; respiration, 27. P.M., has some nausea, and diarrhœa. Pus continues to drain away at about the rate of a pint in twenty-four hours.

"Pulse, 120; temperature, 102½°; respiration, 38.

"January 6.—Passed a restless night, and is very weak. Milk-punch disagreeing, plain milk and brandy and egg are substituted. Pleural cavity was washed out, first with tepid water, afterwards with a dilute solution of liq. iodin. comp. (3i to Oiss), and, lastly, with tepid water. Pulse, 104; temperature, 101°; respiration, 48. About 3 P.M. there was vomiting of a greenish fluid, and soon after the patient passed into a state of collapse, and died about 4 o'clock.

"The *autopsy* was made twenty hours after death, by the resident physician, Dr. Merrill.

"Liver somewhat enlarged, and fatty. Intestines, mesenteric glands, kidneys, and spleen normal. The heart was pushed far over to the right side, where it had contracted adhesions. Some recent lymph was observed upon the visceral layer of the right pleura, and some fluid in the corresponding cavity. A few caseous nodules at the right apex.

"The left lung was compressed into a firm oblong mass, not much larger than the fist, and lay in the upper and back part of the cavity, being closely bound down to the vertebræ. The pleura was greatly thickened, and the lung was covered with a layer of inspissated pus.

"There are two depressions in the lung-tissue which at first sight might be regarded as communications between the pleural sac and the bronchi, but water could not be forced through them by injection from the left bronchus. They appear to be abortive attempts at perforation of the lung. There are two firm and large circular bands of adhesion between the two pleural layers."

Dr. JOHN GUITÉRAS asked whether there were any physical signs in this case to indicate the falling of the lung back against the spinal column.

Dr. HENRY replied that vocal resonance was not increased, but there was blowing breathing above the spinous process of the scapula.

Dr. GUITÉRAS said he asked the question because a man had recently died at the Philadelphia Hospital who was thought to have pneumonia because there was posteriorly such very distinct bronchial breathing, vocal resonance, and vocal fremitus. After death he was found to have pleurisy, and the lung was closely pressed against the vertebræ. It is true the examination was somewhat careless, being only posterior, because the sounds there heard were thought to be so characteristic; but the mistake was complete.

Dr. ALLEN asked what was the duration of the case.

Dr. GUITÉRAS replied that the man came into the drunkards' ward, and died in a few days after admission.

Dr. ALLEN asked whether the fluid was purulent.

Dr. GUITÉRAS said it was not.

Ovarian tumor.

Dr. HENRY also presented a specimen of ovarian tumor, removed post mortem, but, he thought, none the less interesting pathologically on that account. The patient from whom it was obtained was admitted to the Episcopal Hospital on February 2. Her abdomen was enormously distended. She had been tapped about two weeks before admission, for the eighteenth or nineteenth time, when, according to her statement, four pailfuls of fluid were removed. Fluctuation was easily obtained all over the abdomen, which was evenly distended.

She first noticed a swelling in the hypogastric region at the time of the menopause, about three years ago. She was tapped February 18, and two and a half bucketfuls of a fluid of the consistence and color of syrup of acacia were removed. Before the tapping the circumference of the abdomen was sixty-one inches. After a quantity of the fluid had drained away, a large tumor was felt in the right side of the abdomen, extending from the ribs to the iliac region. Her attention was called to it, and she then said that she had discovered it some months before, after one of her numerous tapplings, and had called the attention of her physician to it, whereupon he pronounced it to be the liver.

The tapping only reduced the woman's girth six inches, but was followed by great relief.

Having decided the case to be one of ovarian tumor, which opinion was confirmed by the attending surgeon, Dr. Forbes, arrangements were made to have the woman transferred to the surgical side of the house. On February 25 she was informed of the proposed change, at which she was greatly agitated, and declared that she could never survive an operation. At this time she was in her usual state of health, but she grew worse towards the afternoon, and died the next morning about ten minutes before my visit to the hospital. Dr. Merrill, the resident physician, said there was some dyspnoea preceding death.

At the post-mortem examination it was only possible to examine the abdomen, and that only because it was impossible to get the body in the coffin without reducing its size. The large cyst was adherent to the anterior wall of the abdomen. There was some recent lymph upon the intestines, and the tumor felt during life was found free on the right side. The heart was not examined, and so the cause of death cannot be pronounced upon with certainty. My opinion is that it may have been from heart-clip of gradual formation. The heart-sounds were feeble, but there was no valvular murmur, and the urine did not contain albumen.

Rupture of the aorta.

Dr. W. G. PORTER presented the specimen, and read the following history:

"On the 11th of March I was requested to make a post-mortem examination of the body of a colored man, about 40 years of age, who had suddenly died while at work two days before. He was an unusually strong and well-developed man, who had followed the sea until about eight years ago, when, while in the harbor of Galveston, Texas, he was severely injured by a fall from the mast-head to the deck. He was laid up in the hospital at that place for several weeks, but the nature of his injuries it was impossible to ascertain at the time of the post-mortem. After the accident he had been working in this city, most of the time being employed as a 'longshoreman'; for the last few weeks, however, he had been driving a dray. On Thursday evening last he visited a neighboring drug-store, complaining of a stitch in the right side, for which he procured a warming-plaster. On Friday he worked as usual; on Saturday, while at work, he suddenly went and sat down on

a box, his head fell forward on his breast, and before anything could be done for him he was dead.

Post-mortem examination.—The body was that of an unusually muscular man. On opening the pericardium it was found that it was filled with clotted and fluid blood, and on careful examination an extremely minute opening in the aorta was found on the anterior surface of that vessel immediately above the base of the heart. No atheromatous deposits were found in the aorta, and the other organs were all healthy, with the exception of a slight pleurisy on the right side.

Dr. GUITÉRAS asked whether there was any history of syphilis or rheumatism.

Dr. PORTER replied that he had never attended the man previously, and knew nothing about him, but that he had attended his children for some time, and had not met with any symptoms of syphilis in them.

Dr. GUITÉRAS said that there had evidently been some chronic disease going on here. The aorta is very much thickened, and the heart is probably fatty. There had been a thinning out of the walls at the point of ulceration until the adventitia had bulged out and finally ruptured. This process was also indicated by the ragged edges of the inner opening. This case he thought corroborated the opinion he had expressed with regard to a similar case which he had presented two weeks ago, in which rupture of the heart was suspected to have occurred, but where he thought there was really a rupture of the aorta, the heart having been accidentally wounded during the autopsy.

The specimen was referred to the Committee on Morbid Growths, which reported, March 25, 1875, as follows:

"The atheromatous process in the aorta, presented by Dr. Porter, has ulcerated through the inner and middle coats of the vessel, immediately behind the point of insertion of one of the semilunar leaflets, and there formed a small aneurismal pouch in the adventitia which extends like a diverticulum into the pericardial cavity. The walls of this aneurism are unusually thin, and microscopically nothing but connective-tissue fibres were detected. Upon opening the sac, a small clot was found in its interior. The hemorrhagic effusion found in the pericardium no doubt ensued through the rupture of this small aneurism."

SELECTIONS.

UNILATERAL SWEATING.—Experimental pathology has long pointed to an affection of the sympathetic system as the probable cause of unilateral sweating, since Bernard found that when the sympathetic was divided on one side in horses, there was sweating, as well as dilatation of the blood-vessels, on the affected half of the body. The supposition has lately been confirmed by the post-mortem examination in a case of this affection which is briefly related by Ebstein in the current number of *Virchow's Archiv*. The subject was an anæmic man sixty years of age, and the unilateral sweating affected the left side of the head and trunk and the left arm. The affected parts were not reddened, nor was there any alteration in the pupil. At first the sweating only attended some severe anginal seizures, but afterwards it occurred on any considerable exertion, even in walking up and down a room. Examination of the sympathetic ganglia, hardened in Müller's fluid and alcohol, showed that those of the left side, especially the lower cervical ganglion, presented brown dots and lines visible to the naked eye, and consisting of cavities filled with blood-corpuscles and lined by a distinct endothelium. The walls were thick, and contained many spindle-shaped nuclei. The

vessels were dilated, sometimes varicose. The ganglion-cells were pigmented; on some the nucleus was quite concealed by dark-colored granules. On the right side the nerve-cells presented a similar appearance, but there were none of the cavities, and the vessels were much less dilated.

Ebstein believes that transient interference with the function of the ganglion-cells may have resulted from occasional temporary over-distention of the dilated vessels with blood, consequent on hindrances to the escape of the venous blood. To such transient paralysis of the ganglion-cells he ascribes the hemidrosis. Analogous changes in the ganglia have been found by Lubinoff in several instances of various disorders, as puerperal fever, etc., but they were much slighter than in the case detailed by Ebstein.—*London Lancet*.

ACUTE MYELITIS.—Dr. Guérin-Roze (*La France Méd.*) mentioned a case of this disease at the Société Méd. des Hôpitaux, of which the following are the particulars: A man aged 46 came into the Beaujon Hospital on July 31, 1874. This man suddenly, without warning, had the evening before felt his legs give way under him, and fell down. At the morning visit paralysis of the lower limbs was observed, but he could move his legs. The arms were intact, and sensibility was normal.

The night of the 31st July was passed by the patient without sleep; the arms were affected, and at the morning visit there was paralysis of the muscles, with slight febrile condition. Pulse 88; temperature 37.5°. Dr. Guérin-Roze diagnosed acute generalized myelitis—cause unknown. However, it seemed that the patient had complained some time before of headache, like strokes of a hammer, and three months previously such an attack had got well by means of a purge; another attack was treated unsuccessfully. There was also retention of urine, which was acid, without odor, and sensation was intact.

On the 2d August and following days the pulse was quicker, palsy persisted, but the intellect was clear; some moist râles were heard in the chest. On the 8th there were symptoms of asphyxia, with cadaveric rigidity, and the patient succumbed on the 18th, after twelve days' illness. At the post-mortem examination congestion of the brain was noted; the sinuses, filled with blood, presented a sand-like aspect; in the spinal cavity there were seven chalky and irregular plates, three in front and four behind; there was a dirty serosity, with softening of the anterior segment of the dorsal region and of the inferior segment of the lumbar region.—*Medical Press and Circular*.

CIRCUMCISION.—Dr. De Saint-Germain (*La France Méd.*, April 10, 1875) recently delivered a clinical lecture at the Hôpital des Enfants Malades on Circumcision. The lecturer said that dorsal incision of the prepuce could not be considered as a true circumcision. The discovery of the operation is very ancient, and 1900 years before our epoch we find Abraham practising it. It had from the commencement all the characters of a religious rite, and not of mere hygienic precaution. Herodotus says the Jews borrowed it from the Egyptians; but this is not clear. In general, infants have a long prepuce, and the skin and the mucous membrane are prolonged beyond the gland, forming a sort of little cylinder more or less wrinkled and irregular. This is the ordinary character, and when it disappears the author thought that masturbation existed. Under the influence of this fatal habit the glans is frequently uncovered and exposed to the air and the friction of the clothes; it becomes wrinkled, and the prepuce covers it more exactly. Marjolin attached great importance to this symptom.

The indications for the operation are very numerous.

First, we have imperforation of the prepuce, which is a rather frequent malformation; in two or three days the newly-born infant has not passed urine. There is developed at the extremity of the penis a tumor of some size, tense, fluctuating, a true urinary cyst, and we must hasten to incise the prepuce or to practise circumcision to give passage to the urine.

Circumcision may be of some utility as a preventive means or a curative method in masturbation. In this point of view it is of no use after the age of ten; but at the age of five or six we may obtain a cure. As a general rule, masturbation is a moral disease, against which we must most generally employ moral treatment.

Phimosis is a serious obstacle to fecundation. Hutchinson has much insisted on the remarkable immunity from syphilis or soft chancre found among Jews. Perhaps he is right, for the gland, when constantly uncovered, is flattened, retracted, and indurated, and is no longer covered by mucous membrane, but by a kind of skin.

M. Tarnot, in 1865, published a very interesting study on the practice of circumcision in Algeria among the Jews and Arabs. It is practised among the former eight days after birth.

The Arabs look on circumcision only as a hygienic practice, and await the age of twelve or thirteen before employing it. The operator ties a ligature on the prepuce in front of the gland, and cuts off the part of the prepuce beyond it with a razor.

We may add that MM. Gillet and Grandmont are much in favor of the application of the galvanic cautery to the operation of phimosis.—*Medical Press and Circular*.

CÆSAREAN SECTION FOR CONTRACTED PELVIS (Dr. E. Martin).—The labor began at 3 P.M. At 10 P.M., the pains being good, with the anterior lip swollen, and the foetal heart-sounds being still distinct, Cæsaean section was performed. An incision 11 or 12 centimetres (about 4.7 or 4.8 inches) long was made in the linea alba, extending to the left of the navel for about 0.8 inch above it. Hemorrhage was slight, but became profuse on the uterine incision striking the margin of the placenta. An incision about 11 centimetres (4.6 inches) long was made in the uterine walls, purposely more towards the fundus than the cervix. The child was extracted breech foremost, in order to prevent any laceration of the uterus towards the cervix; a small rent did take place at the fundal end of the incision. The foetus was removed without any difficulty. The child weighed 3180 grammes (7 lbs.), and measured 49 centimetres (about 19½ inches). After rapid removal of the placenta, the hemorrhage from the uterine wound, which was rather profuse, was easily stopped by means of fourteen catgut sutures. The abdominal cavity was most carefully cleaned out with prepared sponges. The abdominal walls were closed with iron-wire sutures, which were passed through the peritoneum; short strips of adhesive plaster were applied between them. A compress soaked in a solution of carbolic acid (1 per cent.) was laid on the wound, and over this cold water, but later on ice-cold applications. The progress of the puerperium was not a particularly disturbed one. The sutures were in part removed on the twelfth and in part on the fourteenth day. She got up on the seventeenth day and left the hospital on the twentieth; when seen three weeks afterwards, she was perfectly well.—*London Medical Record*; from *Berlin. Klin. Woch.*, No. 51, 1875.

WILL AND CHARTERIS ON CHLORAL AS AN ANTIDOTE TO STRYCHNIA.—The *British Medical Journal* for January 23 contained a report by Dr. Hughes Bennett, on behalf of the committee appointed by the British Medical Association to investigate the antago-

nism of medicines, in which it was shown that in the lower animals chloral acts as an antidote to poisonous doses of strychnia. Dr. Ogilvie Will, of Aberdeen, records, in the *Edinburgh Medical Journal* for April, an opportunity which he lately had of demonstrating that this fact is true also of the human subject.

A druggist's apprentice, aged eighteen, swallowed, with suicidal intent, a quantity of pure strychnia. The lad thought he had taken five or six grains,—“certainly not less than four,”—but the exact amount could not be ascertained, as he had emptied it out of a bottle at hazard; but from the rapidity with which the symptoms appeared—only a few minutes after swallowing the poison—and from their severity, it was evident that the dose must have been a large one.

Medical assistance was quickly obtained; and when Dr. Will saw the patient, an emetic had been given and other attempts made to induce vomiting, but without success; violent attacks of convulsions had already commenced, recurring at intervals of about five minutes; often several fits would occur in succession with only a minute or two between each. Dr. Will at once sent for some chloral; but whilst this was being procured the fits rapidly increased in severity and in duration, and when it arrived the patient appeared actually moribund,—as if he could not live many minutes. Thirty grains of chloral were at once administered by the mouth, and “in a very few minutes the good effects began to manifest themselves; the intervals between the spasms became longer, and the spasms themselves lessened in severity.” Another thirty grains were then injected under the skin, and almost immediately afterwards a further change for the better was observed. Later in the afternoon, however,—the poison having been taken a little before 2 P.M.,—the fits again began to increase gradually in frequency and intensity; accordingly, at 5 P.M. thirty grains of chloral were again given by the mouth, and at 6.30 fifteen grains were injected hypodermically. After this the fits subsided; occasional twitchings continued for a few hours; these ceased during the night, and next day the patient was convalescent.

Dr. Charteris, of Glasgow, reports a very similar case in the *Lancet* for April 10. In this instance the patient, a very strong, healthy man, aged thirty-nine, deliberately swallowed the contents of two sixpenny packets of “Gibson's Vermin-Killer” mixed with whisky and ginger-beer, each packet containing fully two grains of strychnia. The poison was taken at about 11.30 A.M., soon after a very substantial meal of ham and eggs, etc., and the symptoms came on very slowly and gradually. It was not till 3.30 P.M. that he was brought to the Royal Infirmary; violent attacks of convulsions were then occurring about every ten minutes. The stomach-pump was used, but the fits continued to increase in severity and frequency until 4.50, when ten grains of chloral were given, and the dose was cautiously repeated at intervals of about twenty minutes. There was little change until forty grains had been given, but then the improvement was rapid and marked; the spasms subsided into mere muscular twitches, and the patient became calmer. The chloral was now given at gradually longer intervals; about 3 A.M. the spasms ceased altogether, and the patient complained only of aching and soreness in the muscles. He recovered completely in three or four days.—J. W. LANGMORE, M.D., in the *London Medical Record*.

SANGUINARIA (*American Journal of Pharmacy*, May, 1875).—Mr. Lewis C. Hopp has found that the supposed alkaloid puccina is nothing more than sanguinarina with some resin and coloring-matter persistently adhering to it, and that sanguinarinic acid is a mixture of citric and malic acids.

GLEANINGS FROM OUR EXCHANGES.

ADDISON'S DISEASE (*The Lancet*, April 17, 1875).—Dr. E. Headlam Greenhow believes that the following deductions may be safely drawn from the data which we possess, although they are undoubtedly imperfect.

The occurrence of Addison's disease takes place almost exclusively among persons employed in active manual labor.

The mortality caused by it is pretty equally distributed over the laborious period of life, and to that period it is almost entirely confined.

The disease is comparatively much more frequent among persons of the male sex, whose employments naturally comprise the heaviest kinds of labor.

And, lastly, a preponderating number of the cases which occur in persons of the male sex are found among those classes of laborers whose occupations are likely to expose them to injury from accident or over-exertion.

The facts thus brought out cannot fail to suggest obvious inferences as to the probability that in many of these cases more or less temporary causes of local inflammation may have existed; and Dr. Greenhow is inclined to believe the origin of Addison's disease in many unexplained cases to be due to traumatic causes, although probably favored in its development by certain constitutional proclivities.

The diagnosis is founded upon the constitutional symptoms, aided, in a large majority of cases, by the presence of more or less of the peculiar change of color in the skin. It is not always unattended with difficulty, but to those who have any practical acquaintance with the disease it is not more doubtful than the diagnosis of many other chronic diseases. The prognosis is invariably grave as regards the ultimate result, though it is impossible to say to what extent life may be prolonged under favorable circumstances. Rest and scrupulous avoidance of bodily and mental excitement, or any other causes of nervous exhaustion, form the essential parts of the therapeutic management of all such cases; whilst the diet and medical treatment must be carefully adapted to the inevitably varying phases of the disease.

BALSAM COPAIBÆ (*The Practitioner*, April, 1875).—Mr. A. R. Hall briefly records some cases in which he has found the use of copaiba to be productive of great benefit. In a case of ophthalmia occurring in a syphilitic patient and in which the whole anterior chamber was filled with pus, two drachms of copaiba were given in mucilage three times daily, with the result of destroying the pain, causing the absorption of the pus, and ultimately curing the patient. Mr. Hall gives it in all cases of iritis and scleritis in large doses, and asserts that it speedily causes the pain and inflammation to disappear. In thirty cases of purulent ophthalmia occurring in children he simply painted the lower eyelids, upper part of the cheeks, and temples with the pure balsam, and they all got well quickly without any damage to the eyes. In threatened mammary abscess, dysentery, chronic rheumatism, and even in indolent leg-ulcers, he has found great benefit to follow its administration.

INJURIES TO THE HEAD (*Medical Times and Gazette*, February 27, 1875).—Mr. Jonathan Hutchinson points out that the danger of laceration of the scalp, especially if it be accompanied by detachment of the pericranium, consists in the occurrence of suppuration between the bone and the internal periosteum, to be followed in its turn by inflammation of the arachnoid membrane; and secondly in the choking of the gangrenous veins of the diploe of the dying fragment with coagula and the pro-

ducts of inflammation, which may extend to the sinuses and cause pyæmia. Some of the most typical cases of pyæmia are induced by the death of a very small area of bone. In cases in which the propriety of primary trephining is debated, the surgeon may put wholly aside any fears as to increased risk of pyæmia after that procedure, and may adopt it or not, as the other circumstances of the case may indicate.

TRAUMATIC POPLITEAL ARTERIO-VEIN-ANEURISM—LIGATURE OF THE ARTERY AND VEIN—RECOVERY (*The Lancet*, April 24, 1875).—Mr. Thomas Annandale reports the case of a boy, æt. 10, who received a wound in the popliteal space, which resulted in an irregular pulsatile swelling, the size of an infant's head, and which was diagnosed as an aneurism of the popliteal artery. It was decided to treat it by laying open the sac and tying the artery above and below the wound. A tourniquet was applied to the femoral, and a limited opening was made into the sac to admit of the separation with the finger of any adherent clots. The sac was then opened freely by a wound about five inches in length, and all the blood and clot in it sponged out. There was not very much clot, the contents consisting principally of fluid arterial blood. By this proceeding two openings were clearly exposed at the bottom of the sac. These openings were parallel to each other at a distance of about an eighth of an inch in the longitudinal direction of the limb. They were both about a quarter of an inch in length, and had the appearance of slits with little gaping of the edges. A probe passed into each opening determined the fact that one communicated with the canal of the popliteal artery, and the other with that of the popliteal vein. The canals of both vessels were pervious as far as the probe would pass above and below the wounds. The sac of the aneurism was well formed, circumscribed, and white and smooth on its inner surface. The popliteal artery, being carefully cleared by dissection for a short distance, was ligatured above and below the wound with prepared catgut; and the popliteal vein, being cleared in the same way, was also ligatured above and below the wound with the same material. The tourniquet and elastic ligature were now removed, and a small artery and vein which bled, in the region of the wounded vessel, were tied also with catgut. A drainage-tube was then introduced into the cavity, and antiseptic muslin was applied in the usual way, after the edges of the wound had been stitched together. The whole operation was performed under the antiseptic spray.

The case resulted in a perfect cure, without any complication.

Mr. Annandale considers that this case has practically demonstrated that both artery and vein may be successfully ligatured, and he confidently recommends the adoption of this plan of operation, which has never before been practised in this class of cases.

The advantages of this plan are, in his opinion, (1) certain closure of the openings of communication in both artery and vein; (2) absence of any risk from venous hemorrhage or absorption in connection with the wounded vein; (3) its practicability in the large majority of cases; (4) its easy performance without much dissection.

A NEW METHOD OF ARRESTING HEMORRHAGE (*The Medical Record*, May 1, 1875).—In a recent clinical lecture, Dr. Weber, after considering the general anatomy of the arterial system, the mechanism of the spontaneous closure of divided vessels, and some of the more evident objections to the employment of ligatures, torsion, acupuncture, etc., continued as follows:

We should have a process of treating the divided

vessel which would simply assist nature, not supplant her, by mechanically-acting principles. The failure of nature to arrest hemorrhage spontaneously in larger-sized arteries is unquestionably due to the fact that they do not possess, for cogent physical reasons, sufficient muscular and circularly-arranged fibres to bring about the contraction and diminution of the short axis of the vessel, and to effect longitudinal pleating, which we believe important both for the evolution of the fibrinoplastic agency and the security of the clot when formed. It does not seem probable that, other things being equal, the greater force of the blood, on account of the larger size of its column, should be the only reason why the spontaneous arrest cannot take place in a larger vessel.

We know that the muscular tissue of the middle coat, the chief contractile material, is not commensurate with the size of the vessel; that, in fact, as remarked before, it positively diminishes with the size of the vessel. There must be a reason for this; it cannot be accidental. It must find its explanation in the physical necessities of the circulation of the blood in large vessels.

Now, if this be correct, and if the want of sufficient contractile force is the cause of the non-arrest of bleeding, can we not rectify matters by simply doubling or trebling the amount of the circularly-acting tissue, by turning the end of the vessel inside out, as we would turn up the cuff of a sleeve? By so doing we would obtain double or treble the amount of contractile force, and also furnish an equivalent for retraction.

Carrying out this notion, Dr. Weber obtained an instrument by which he could fix the vessel at the time of turning over its coats, and which he describes as the *fixateur à gaine* of M. Luër of Paris. He made a number of experiments on dogs, with satisfactory results, and found that he could prevent the vessel from becoming straight again after the reflection had been made, by simply notching its extremity at each end of a transverse diameter. The notch was made through the two walls,—the main wall and the reflected,—and, commencing at the point of reflection, extended about two lines in a longitudinal direction.

Owing to the contraction of the circular fibres after division, a wedge-shaped gap was formed at each notch, so that the circumference of the vessel at the edge of reflection was increased. This caused the reflected piece to appear to surround the end of the vessel more closely,—in fact, to constrict it.

If this does not prove sufficient to retain the reflection *in situ*, he introduces immediately behind the point of reflection a little delicate peg, made of the end of a No. 12 English sewing-needle; and should this fail to arrest the bleeding instantaneously, he applies digital compression for a short time to the end of the artery. He has now tried this plan on the anterior and posterior tibial, the brachial and the femoral arteries, and with complete success. He has found that very small arteries can be everted as easily and promptly as larger ones; and believes that the method is justifiable and practicable in a large number of surgical operations.

CHLORIDE OF ZINC (*Medical Press and Circular*, April 7, 1875).—Mr. Lister has found chloride of zinc to have the remarkable property, among all antiseptics that he has tried, that a single application of it to a recent wound in a solution of the strength of 40 grains to the ounce of water, although it produces no visible slough, yet prevents the occurrence of putrefaction on the cut surfaces for days together, in spite of the action of the septic material; and if the discharges have opportunity to flow freely away, as after the removal of a tumor of one of the jaws or a portion of the tongue, there may be absolutely no odor from first to last, the divided textures being thus guarded from the bad effects of the

putrefaction during the dangerous period before they have been covered by the protecting layer of granulations.

MISCELLANY.

DRESS AS A CAUSE OF PELVIC DEFORMITY.—When the body is erect, says Dr. Aveling, in a discussion of this subject in the *Obstetrical Journal* for January, the influence of dress is of sufficient importance to demand careful attention. Attitude depends upon clothing more than is generally supposed. The stooping position, which has been referred to as injurious, is often produced by the peculiar feminine vestmental arrangements at present in fashion. The greater part of the burden of a woman's clothing hangs from the posterior part of her body. All the folds of her skirts are carefully disposed behind, and the swaying influence of their weight here is much increased by the leverage power granted them by the numerous ingenious devices adopted for insuring their projection backwards from the body. As the balance can only be maintained by inclining the body in the opposite direction to that in which it is drawn, it must necessarily be bent forward to counterpoise this retroverting influence. High heels also throw the body out of its proper balance, producing stooping, relaxation of the abdominal walls, and debased pelvic inclination. But dress, in its strictest sense, has still another potent way of causing mischief,—namely, by its weight when suspended from the waist; a weight not inconsiderable in itself, but rendered of much consequence by its persistent action. The bands, from which the garments that women wear hang, are chiefly supported by the abdominal walls and the viscera beneath them. Ultimately, therefore, they must compress the pelvic organs and cause their downward displacement. As a rule, all vestments should be carried by the shoulders. Long robes falling from them and girded at the waist are the least harmful, if not the most beautiful garments a woman can wear. If, however, it be absolutely necessary that her dress should be divided into two portions at the waist, let her by all means adopt some method of suspending the lower half from the shoulders. Braces of a very simple and inexpensive kind, having safety-hooks, which may be passed through the bands of the skirts, are now easily obtainable, and their general adoption is much to be desired. The position of the waistband must also be considered, for whether it should be high or low is a point of much importance. The fashion of short-waisted dresses is far more healthy. Long waists involve abdominal compression by stays, and that closer contact of bands with the walls of the abdomen which enables the downward dragging weight of skirts to exercise its influence most injuriously. The natural position of a woman's waist is neither high nor low, but in that part of her body which happens to be the smallest in circumference. If fashion would only allow this to be the proper place for the waistband, we should not, as now, have the constriction of stays and the

gravitation of garments conspiring in the production of prolapse and its concomitant disorders.—*London Medical Record*.

VARIETY OF TINTS.—As an illustration of the limitless number of combinations which the three primary colors are capable of, it may be interesting to know that in the Gobelin tapestry manufacture twenty-eight thousand distinct shadings of yarn are employed, each one distinguishable by the practised eye.—*Journal of Applied Science*.

SLATE FOR ENGRAVERS.—As a matter of interest to any desiring illustrations, the discovery is worth noting that plates of polished slate may be used as substitutes for boxwood in engraving. It is stated that such engraved plates will furnish 100,000 impressions without loss of detail, and are not affected by oil or water. One drawback which they possess is that they are readily scratched, an objection from which wood is almost free.

STRATEGY VERSUS STRENGTH.—According to the *Cincinnati Medical News*, a Spanish physician, J. Fuentes, resorted to the following expedient in a forceps case. He says, "It was during the night, at an hour very unreasonable to call for assistance of a colleague; after fruitless attempts, my strength was entirely exhausted. I was all in a perspiration, and inexpressibly fatigued, when a practical idea occurred to my mind. I remembered how wire-makers pull the copper for wire. I procured at once a strong belt, which I fixed around my waist, and in it I hooked the free handles of the forceps that had been properly applied; then, holding my knees against the bedside and pulling methodically together with my waist and arms, I succeeded easily in bringing out the fœtus alive and free from injury."

POISONING BY NITRATE OF SILVER.—A case is reported in the *Brighton Guardian* in which a man hastily took a piece of lunar caustic, thinking it to be an anti-bilious pill. Soon after, he felt a burning in the throat. The patient said he felt the caustic in the right side of the throat, but his physician, Mr. Hart, searched for it with his finger, and could feel nothing. Two or three hours after, Mr. Hart was sent for, and found great difficulty of breathing, for which he performed an operation and carried on artificial respiration. But the man died. At the post-mortem, the stomach was found congested. "On examining the throat, at the back of the tongue he found a large black patch in the fold of the mucous membrane, where the poison had lodged. The passage into the lungs was completely blocked up, and the throat much swollen. Deceased died from suffocation." A similar case to the above, in which croup was caused by a bit of caustic dropping into the windpipe, is recorded by Dr. Albers, of Bremen, and mentioned by Christison.

WASHING out of the stomach, and the aspiration of liquids secreted by it, is more and more practised in Germany, since Kussmaul highly praised this method. Dr. Schliep uses it in nearly all affections of the stomach, especially in chronic gastritis, with or without dilata-

tion. The cure of chronic catarrh, according to his account in the *Deutsche Klinik*, vol. xvi., would require but a limited number of applications. In simple catarrh, five would suffice, on an average. He uses this method even in the dyspepsia of consumptive patients. In dilatation of the stomach, he empties that organ with the pump every day. He performs the washing out even in cancer; he uses pure water, or adds bicarbonate of soda to the water, if the liquids be very acid; or permanganate of potash, if the liquids show signs of fermentation; carbolic acid, when they contain vegetable parasites; boracic acid, as a disinfectant; and tincture of myrrh, in atonic dyspepsia with abundant secretion of mucus.—*Boston Medical and Surgical Journal*.

CURIOUS EPITAPH.—In the Jews' Burial-Ground at Bethnal Green is the following:

Mrs.

S earch England or the universe around,
A doctress so compleat cannot be found;
M edicines prepared from herbs remove each ill,
P erfect great cures and proclaim her skill.
S ome hundreds her assistance frequent claim,
O ften recorded by the trump of fame.
N ow, reader, see if you can tell her name.

—*Medical Press and Circular*.

SPECIFIC GRAVITY OF CHOLESTERINE.—When crystallized cholesteroline is dropped upon the surface or diffused in a finely-divided state through water, it floats upon the surface. From this it has been concluded that this body is less dense than water.

M. Mehu, in a communication to the *Société de Pharmacie*, proves by a series of ingenious experiments that cholesteroline is in reality heavier than water,—having a density, according to his determinations, of 1.747.

The floating of cholesteroline upon water is due to the adherence of minute air-bubbles, which not only attach themselves to the sides of the crystals, but are found between the lamellar plates of which the crystals are themselves composed.—*The Laboratory*.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 18, 1875, TO MAY 24, 1875, INCLUSIVE.

HAMMOND, J. F., SURGEON.—To report to the Commanding General, Military Division of the Atlantic, for duty as Attending Surgeon, relieving Surgeon Bill. S. O. 92, A. G. O., May 17, 1875.

BYRNE, C. C., SURGEON.—Assigned to duty as Post-Surgeon at Fort A. Lincoln, D. T. S. O. 88, Department of Dakota, May 18, 1875.

WEEDS, J. F., SURGEON.—When relieved by Surgeon Byrne, to comply with S. O. 75, c. s., War Department. S. O. 88, Department of Dakota, May 18, 1875.

WOLVERTON, W. D., ASSISTANT-SURGEON.—Assigned to duty at Fort Abercrombie, D. T. S. O. 87, Department of Dakota, May 15, 1875.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Colville, W. T. S. O. 58, Department of the Columbia, May 7, 1875.

BROWN, J. M., ASSISTANT-SURGEON.—Leave of absence extended twenty-three days. S. O. 97, Military Division of the Atlantic, May 17, 1875.

BROOKE, JOHN, ASSISTANT-SURGEON.—Relieved from duty in Department of the Columbia, to proceed to Philadelphia, Pennsylvania, and, upon arrival, report by letter to the Surgeon-General. S. O. 92, c. s., A. G. O.

STEINMETZ, WILLIAM R., ASSISTANT-SURGEON.—Relieved from temporary duty at Fort McHenry, Maryland, to report to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 92, c. s., A. G. O.

SATURDAY, JUNE 5, 1875.

ORIGINAL LECTURES.

CLINICAL LECTURE ON LUPUS ERYTHEMATOSUS.

BY LOUIS A. DUHRING, M.D.,

Clinical Professor of Diseases of the Skin in the University of Pennsylvania.

Delivered May 18, 1875.

Reported by ARTHUR VAN HARLINGEN, M.D., Chief of the Skin Clinic.

GENTLEMEN,—The patient whom we have before us, and whose case shall form the subject of my lecture to-day, presents an affection of such interest that I shall devote the greater part of the hour to its consideration. It is one which, although not very uncommon, does not often present itself developed to the extent to which we have it here. Her history is as follows:

She is a married woman, 26 years of age, with light-brown hair. The affection for which she seeks relief first made its appearance fourteen months ago, as a roundish patch, situated on one side of the nose. From this point it began to spread over the face on the same side, and, some time after, attacked the other side of the face, extending under the eyes in the form of a semicircle. Afterwards it appeared successively on the forehead above the nose, on the side of the chin, and on the right side of the head behind the ear. The disease has never shown itself in any other part of the body. The patient is of large frame, stout, well nourished, and enjoys average general health; she has gained flesh since the appearance of the skin-trouble. Her appetite is good, bowels somewhat constipated, menstrual discharge regular but scanty. She has always been subject to cold hands and feet, even in summer-time. For the last three years she has suffered from occasional headaches, occurring, perhaps, every few days or once a week. For some years past she has been troubled with seborrhœa of the scalp, and she has this trouble at present. Before the present disease broke out, the skin was remarkably free of eruption of any kind. About five years ago she had a slight attack of rheumatism, which has not been repeated. Although the disease of the face has been better and worse from time to time, yet it has never shown any tendency to disappear; it is said to be spreading slowly now from week to week. So much for the history.

Proceeding to the examination of the eruption, we observe that it consists of numerous variously-shaped patches, mostly roundish, the size of a split pea and larger, many of which have coalesced and form patches of greater size. The cheeks are involved symmetrically, the area of disease on either side being perhaps the size of the palm, and extending from the lower eyelid almost to the ramus of the jaw. The nose is partially invaded; the bridge and the tip being especially attacked. The alæ of the nose are free, as well as the region about the mouth, chin, and the red part of the lips. Beneath the lower lip and around the chin there are

circular, isolated patches, from the size of a pea to that of a cherry. A similar patch may also be noticed back of the right ear; the lobes of the latter are free. The eyelids are partially invaded, the spaces between brow and lid being symmetrically occupied by elongated patches, which also extend around the inner canthi, close to the conjunctivæ. On the forehead you will notice two irregularly-shaped, linear patches, extending outwards from the nose half-way up towards the scalp.

The patches over the cheeks are purplish-red in color, and are covered with very fine, adherent, greenish-white and yellowish scales. The mouths of the sebaceous glands are everywhere open. The skin, moreover, has an inflammatory appearance, feels hot at times, and occasionally itches and burns very severely. The itching has been a more or less constant symptom, but has not manifested itself more of late than earlier in the history of the disease. The line of demarcation is everywhere well marked; the diseased patches, although but very little elevated, terminate abruptly against the sound skin. The isolated, circular patches, which are the most recent manifestations of the disease, also show a sharply-defined border, likewise but slightly raised. Our patient tells us that the patches vary considerably in color at different times, occasionally becoming quite purplish, at other times of a much paler hue. It should be remarked that she experiences no pain.

The course of the affection has been intermittent; it has increased by attacks taking place every few weeks, at which time the disease would spread considerably in a few days, and then remain quiescent during the interval.

Now, having heard this woman's history, and having made a careful examination of the appearances presented, let us leave the investigation of this individual case, and go into a consideration of the affection in general.

The affection before us is known under several different names: lupus erythematosus or erythematoses, seborrhœa congestiva, etc. Bielt, who first described it many years ago, gave it the title "*lupus qui détruit en surface*," in view of the fact that while the disease is a destructive one as regards the cutaneous tissues, its action is not deep like that of lupus vulgaris, but is confined to the upper layers of the skin. The name seborrhœa congestiva was originally given by Hebra, who regarded the seat of the disease to be in the sebaceous glands, but he afterwards modified his views on the subject of its pathology and abandoned this name for that by which the affection is now generally known, lupus erythematosus, erythematosus lupus.

Lupus erythematosus is included under the class of "cellular new formations." Its usual seat is upon the face, where it most commonly shows itself first on the bridge of the nose, spreading out over the cheeks on either side, so as to form the appearance of a butterfly, a simile first noted by Hebra. A word as to color. It is variable, sometimes light, again dark; very often it is a beefy red, like inflammatory psoriasis.

The patches are always more or less covered, as we have seen, with scales, whitish, yellowish or greenish in color, and very adherent. The disease is invariably superficial in character; it never goes on to ulceration; there is never any moisture, and the appearance of a given patch is always the same from one month to another.

Lupus erythematosus is, as I have said, usually confined to the face, for which locality it has a strong preference, and particularly for the cheeks. It, however, does occur on the body. Occasionally we see it on the red portion of the lips, as in this photograph which I show you.

Lupus erythematosus is a disease of adult age; it never makes its appearance before puberty. In this respect it is quite different from lupus vulgaris, which is apt to make its appearance at an early age. This is an important point, for these diseases are often confounded.

The causes which produce the disease are obscure, but are at times the same as those which bring on ordinary seborrhœa, *e.g.* anæmia, chlorosis, and the like. The French have given the disease the name (among others) of *Scrofule Érythémateuse*, but this often proves a misnomer: there is certainly no sign of scrofula in the case before us; our patient is a fine, hearty young woman, showing no sign of any constitutional taint whatsoever.

As regards diagnosis, the tissues involved, the shape and locality of the patches, the characteristic greenish, strongly-adherent scales, are all so peculiar that in most cases there can be but little difficulty.

There are, however, five diseases with which, under some circumstances, lupus erythematosus might be confounded. The first of these is lupus vulgaris. In this affection, however, we find papules and tubercles almost always present; neither of these are found in lupus erythematosus. The fact mentioned a little while ago, that our disease is one of adult life, while lupus vulgaris always begins in the young, may also be remembered. Both diseases are apt to attack the face, but the formation of tubercles which subsequently break down into ulceration would decide the matter. The brownish crusts found occasionally over the lupus vulgaris patch might be mistaken for the scales of lupus erythematosus, but a closer examination would show that in the first case we have *crusts* formed of dried pus, while in the other we have *epithelial scales*.

Secondly, we may sometimes mistake lupus erythematosus for psoriasis. The general appearance of the eruption before us is not unlike that of a patch of psoriasis; but we should hardly be likely to find the latter disease in one large area on the face, but rather in a number of smaller patches. Besides this, close examination of the scales would show a very decided difference. Those of psoriasis are friable, flat, superficial and easily picked off, while the scales of lupus erythematosus are exceedingly adherent, and when removed show villous projections consisting of the contents of sebaceous glands, with occasionally a cast of their lining membrane.

Thirdly, the disease before us resembles at first

glance certain forms of syphilis, but upon closer inspection we could hardly fail to exclude this. The history and course of the affection, moreover, would aid in deciding the matter.

Fourthly, we might confound lupus erythematosus with eczema, but, although a superficial glance might cause us to hesitate a moment, an examination would reveal the absence of the characteristic eczematous weeping and crusting; the glandular involvement would in addition be quite sufficient to distinguish them.

Fifthly, lupus erythematosus has occasionally been mistaken for *tinea circinata*. The history of the disease, however, would show that its course is far different from that pursued by ring-worm of the face. Microscopic examination of the scales would serve to dissipate any doubt.

Now, as to the pathology of the disease. It begins in the glands of the skin, chiefly the sebaceous glands. If you examine the case before us, you will notice that in certain places the sebaceous follicles are enlarged, plugged up with altered sebaceous matter, and covered by an adherent scale. Beyond the region of the disease itself, you may see sebaceous glands congested and swollen, which will in time become new centres of disease. The greenish color of the scales is in part due to their natural color, in part the result of admixture with dirt.

The disease-action begins by an infiltration or deposit of fine cells in the corium, and particularly about the sebaceous glands. They are minute, highly refractive, and roundish, not unlike granulation-cells. They are very persistent. Lupus erythematosus is a markedly inflammatory disease; itching and burning are frequently (though not always) observed. The extent of these symptoms is variable.

They are aggravated by different external causes. Our patient, for instance, notices that when she goes out into the open air, and particularly when her face is exposed to the wind, they are more severe. I have frequently observed the same fact in other cases. The course of the disease is uncertain; it suddenly spreads a few lines or more, and then stops for a time. It is during this rapid growth that the itching and burning are most violent.

As regards prognosis and treatment; cases of this disease are apt to prove exceedingly stubborn, yet differ greatly in this respect: one may get well quite rapidly, while the next will resist all treatment. Occasionally patients who are attacked in so severe a manner as in the case before us are carried off by some intercurrent disease, as erysipelas; this, however, is not common, nor is it explainable. I simply present it as a fact which has been noticed by several good observers (Hebra, Kaposi).

There is no specific treatment for lupus erythematosus; we must manage each case as may prove best for it. Among the internal remedies most likely to prove useful are cod-liver oil, arsenic, iron, and iodide of potassium, together with all those means ordinarily employed for the purpose of raising the tone of the system and improving nutrition.

As regards external remedies, stimulant and caustic applications, and particularly alkalies, are

most useful. Among the best of the latter is the ordinary *sapo viridis* or soft soap (containing about four per cent. of caustic potassa in excess). This may be rubbed into the diseased patches with the aid of a flannel rag, a little warm water being added from time to time. After the scales and *débris* are thoroughly cleaned away, the surface of the patch may be washed with pure water, dried, and some ointment, preferably the unguentum *hydrargyri*, applied, spread upon cloths of proper size and shape. These applications should be made twice daily. We may substitute the preparation known as "*spiritus saponis alkalinus*," a solution of *sapo viridis* in absolute alcohol, for the soap, and in some cases with advantage.

Instead of mercurial ointment, other preparations of a somewhat more stimulating nature may be employed. Among these the ointments of red iodide of mercury, sulphur, and iodide of sulphur, may be mentioned.

All these should be tried before having recourse to stronger applications; but when the milder forms of treatment have failed, the strong caustics may be employed. Solution of caustic potassa, one part to four or eight of water, may be advantageously applied with a small swab, rubbing the diseased surface, and quickly applying vinegar or dilute acetic acid to neutralize the alkali and prevent excessive caustic action. Of course, where there is a large patch, only a portion should be gone over at any one time; the eschar which forms may be dressed with water, or olive oil on lint. The cauterization may be repeated every week or so, until the whole diseased tissue has been destroyed. Of course this is a last resort, but it usually answers when everything else fails.

A strong solution of carbolic acid, or even the crystals themselves, may also be used. The application, however, is a very painful one, and the smarting lasts some hours.

In the case before us we shall begin by giving our patient the iodide of potassium in the dose of ten grains thrice daily, and shall, for the present, use no local treatment.

Finally, let me advise you to gain your patient's confidence before beginning any course of treatment. We shall tell this woman that the affection is a tedious one, may last a long time, months, or even years, and let her commence with a full appreciation of the necessity of patience. On the other hand, we shall make her understand the necessity of efficient and sustained treatment. *Lupus erythematosus* never, or at least very rarely, gets well spontaneously.

INSOLATION DURING PREGNANCY (*American Journal of Obstetrics*, May, 1875).—Dr. M. B. Wright reports a case in which during the three weeks preceding labor the temperature of the mother was greatly elevated, pulse 120 to 140, intense headache. These symptoms all disappeared within twenty hours after the delivery of a *fœtus* two or three weeks in advance of full term, weighing about six pounds, and similarly overheated. The liquor *amni* and placenta were also found to be much above their usual temperature. No definite cause for these peculiar phenomena was discovered.

ORIGINAL COMMUNICATIONS.

PHOTOGRAPHIC ENLARGEMENTS OF MICROSCOPIC OBJECTS.

BY CARL SEILER, M.D.,
Philadelphia.

Read before the Biological and Microscopical Section of the Academy of Natural Sciences, and recommended for publication in the Philadelphia Medical Times.

THE processes of different workers in microphotography, with all the minute details and description of the apparatus used, have repeatedly been published, so that I have to ask your indulgence for bringing again a new apparatus to your notice.

The first experiments I made in this direction were attended with very little success, which, however, did not discourage me. They were made with a complete microscope and camera,—that is to say, eye-piece and photographic objective were retained, while reflected sunlight was used for illumination. In continuing my experiments the objective of the camera and the eye-piece were found useless, and were discarded, and without them better negatives were obtained. The great objection was the motion which resulted from even the slightest tremor of the house, caused by passing wagons or by the walking of persons in rooms above or below. This motion and its consequences were removed to a great extent by discarding the body of the microscope, and by using the objective in connection with the camera, or, rather, a long wooden box. In this way the microscope and the camera were converted into one instrument. But two difficulties presented themselves in using this new form of apparatus,—viz., that of obtaining the picture on the ground glass in focus, and that of illumination of the object. The first was overcome by using a quarter portrait-tube, and putting in the place of the front combination a disk with a central opening, into which the objective was screwed, the back combination of the tube having been removed. Then by passing a resined cord over the mill-head of the tube I was enabled to bring the object in focus, being at some distance from it. This was done by pulling at the ends of the cord, and thus revolving the mill-head, which caused the approximation of the lens to the object. A stage was then constructed by extending an arm in front of the tube with a perforated plate at right angles to it, upon which the specimen was secured by clamps. For illumination, a large concave reflector was placed at some distance in front, and so bringing the light to a focus directly in front of the object.

This form of apparatus I did not find necessary to alter materially; all I did to improve it was to make the body of the camera of paper, and extensible, so that it can be lengthened to ten feet, and to add a movable stage, which, moved by long rods, enables me to bring any part of the object into the field. For the cord I substituted a rod and two friction-gear wheels, with which I can focus with considerable fineness. The main difficulty, however, was, and still is, the illumination; and it was only

after a long series of experiments that I could obtain tolerable results.

The first condition, at least for histological preparations, is that the light should be absolutely central. Even then the image on the ground glass will be a confused one, with bright lines and dark shadows, and single cells or blood-disks will show three and four outlines, the rays of light being bent in their course through the object. It has been recommended to interpose a piece of ground glass between the reflector and the object, in order to diffuse the light and so get rid of this difficulty. But I found that this does not answer the purpose, as it reduces the penetrating power of the objective, and also takes away the *crispness* of the picture, if I may use this expression. It does, however, flatten the field very considerably, and is of great advantage in vegetable and insect preparations, where the lines are comparatively coarse. Rendering the light monochromatic by means of a solution of ammonio-sulphate of copper contained in a glass cell obviates this trouble to a certain extent, and has also the advantage of bringing the chemical and the visual focus almost in the same plane, as well as of absorbing the heat-rays which would otherwise destroy the object. As this solution becomes turbid if the cell is not perfectly tight, and as it penetrates almost any substance, I had at first considerable difficulty in keeping the solution clear. I now use a cell made of glass in the following manner: a hole is ground into a one-fourth inch thick piece of plate-glass, extending to the margin, with a conical opening. Then two pieces of thin plate-glass are cemented on each side of the thick glass by means of a mixture of glue and molasses. In this way a circular cell is formed, with a funnel-shaped opening on the top, through which the solution may be introduced and then the opening closed by a tight-fitting cork. If now this monochromatic sunlight is concentrated by means of an achromatic condenser upon the object, the result on the ground glass is far better in every respect than without the condenser. It must, however, be used with caution, so as not to introduce too much light, as in that case it is impossible to give the sensitive plate the proper time of exposure.

The greatest advantage, however, I derived from introducing diaphragms into the condenser and objective, and also into the camera itself, in this way cutting off all superfluous light. As the German lenses, which I am compelled to use, do not allow the introduction of a stop between the front and back lenses, I fitted a cap with a small opening over the front lens, and another over the back lens. These stops increase the penetrating power of the objective considerably, and also make the picture appear on the ground glass almost as sharp and crisp as it is seen in the microscope itself.

It has also been recommended to take the focus on clear plate-glass with an eye-piece, because the surface of the ground glass is too rough to allow a slight difference in focus to be seen, while it is readily perceived in the negative. But focussing with the eye-piece is not only very tedious, but also more uncertain than even the roughest ground

glass; at least it has proved so in my hands. I use for a focussing-screen a piece of plate-glass which has been varnished on one side, and then rubbed with alcohol, which makes it slightly turbid,—not enough to prevent transparency, but sufficient to make the picture apparent.

It is as a matter of course most important that only the best preparations should be used, the quality of the objectives being of far less importance. Most of the specimens which I used, and of which I placed a few photographs on the table, I obtained through the kindness of Dr. J. G. Hunt. The preparation of the negatives and prints is the same as in ordinary photographic work, with the exception that the negative cannot be made strong enough by mere development with iron, and has therefore to be intensified in order to print well.

It is hardly necessary for me to say that the advantages, both for teachers and students, which may be derived from good photographs of microscopic objects, are very great, as drawings, no matter how well and faithfully executed, always can give only that which the artist or draughtsman has seen; and we all know how very deceptive appearances in the microscope sometimes are, so that even those who are perfectly familiar with the instrument and object are often misled,—how much more easily those who are not familiar with microscopy, and who are only occasionally required to make a drawing of what they see in the instrument!

Micro-photography, however, is as yet in its infancy, and the results obtained are by no means perfect; but they are encouraging, and I hope that by perseverance pictures may be obtained which will be equal to the one formed on the retina of the human eye.

THE MOLOCH OF TRADITION.

BY BENJAMIN LEE, A.M., M.D.

AT the meeting of the Philadelphia County Medical Society of February 11, 1874, I had the honor to present a paper entitled "The Practical Identity of True Croup and Diphtheria." I had first written "The *Essential* Identity," but changed it, thinking by softening a little the positiveness of its assertion to provoke less opposition in the minds of my hearers to the doctrine which I desired to maintain. I wish to preface this brief addendum to that paper (which subsequently appeared in this journal) with the statement that I consider the identity essential as well as practical, and practical because essential. My aim, then, was not so much to present my own views or to frame an argument in their support, as to show how great a weight of authority could be brought to bear on that side of the question from the contemporary writings of European physicians, especially Continental. I confess I was unprepared for the entire lack of concurrence with which the proposition was received. My heavy ordnance, borrowed for the occasion, produced no more impression on the Society than a carefully-mounted battery of pop-guns on an iron-clad. While there was no lack

of kindly commendation of the labor displayed in the preparation of the essay, it was evident that the theory broached was unanimously condemned as rank heresy. Even the accomplished author of the paper on "Tracheotomy in its Relations to Croup and Diphtheria," which followed soon after, on whom, as a man of advanced views, I supposed I could count as a second, showed himself still bound with the cords of dogmatic teaching, a firm believer in the purely sthenic inflammatory character of membranous croup.

For the sacrifice of what hecatombs of lives is this miserable word inflammation, or the misuse of it, responsible! And if we are now to have a revival of indiscriminate phlebotomy, how gory will be the altar of the Moloch of tradition! I have since had gratifying evidence, however, that certain practical hints which I threw out in regard to the early use of antizymotics and tonics, and the avoidance of all depressant measures at the outset of every case of acute faucial disease, before it has had time to differentiate itself, did not fall altogether dead. I simply wish now to call the attention of those who were kind enough to listen to or read the former somewhat lengthy article, to the fact that the ranks of those who maintain the specific character of true croup as simply a form of diphtheria have recently received two most powerful accessions in England.

From an article by Sir William Jenner, entitled "Clinical Lecture on Croup and the Diseases that resemble it" (*Lancet*, January 16, 1875), I make the following extracts, and I desire to say that they are in no sense garbled, but represent the opinions of the distinguished author as honestly and exactly as the entire article would do:

"Membranous inflammation of the larynx—inflammation, that is, attended by the presence of lymph on the surface of the mucous membrane of the larynx—is croup. This is a peculiar form of inflammation, as the presence of the lymph proves. . . . The inflammation is a so-called specific inflammation. . . . Diphtheria is an acute specific disease, attended by inflammation of the pharynx, having, as its result, exudation of lymph. . . . From the pharynx it may spread down the trachea and into the bronchi. So that in diphtheria we get not unfrequently membranous inflammation of the larynx. But membranous inflammation of the larynx, I have told you, is croup. Is there, then, a membranous inflammation of the larynx distinct from the acute specific disease, diphtheria? Are there a true croup and a diphtheritic croup? Certainly, if you were to place in the hands of the best pathologist the larynx of a child who had died from membranous inflammation of the larynx, the so-called idiopathic croup, and that of one who had died from a true diphtheritic inflammation of the larynx, he would be unable to distinguish the one from the other. There is no anatomical character by which he could say, 'This is true croup; this is diphtheritic inflammation of the larynx.' But it is beyond question that true diphtheritic inflammation may be limited to the larynx; that in exceptional cases the pharynx escapes the exudation. Seeing, then, that there

are no anatomical characters to distinguish the one disease from the other, are there any clinical characters by which the two affections may be separated? It has been supposed that the presence of albumen in the urine would be sufficient, and I formerly laid much weight on this distinction. But later years have satisfied me that in cases which present all the characters of true croup, which are sporadic, spread to no other person in the house, come on apparently from exposure to cold and damp,—that in such cases albumen may be present in the urine. It has again been urged that true croup has no tendency to spread; but this manifestly should no more separate a single case from the diphtheritic croup than should a single case of scarlet fever, because it did not spread, be separated from other cases of scarlet fever. The cause, again,—the fact that some cases of croup come on after distinct exposure to cold and wet,—cannot be sufficient to separate croup from diphtheritic croup, for it is beyond question that a considerable number of cases of diphtheria do, to all appearance, at least, date their origin from exposure to cold and wet. I have seen several solitary cases of true diphtheria thus originating, not spreading, or spreading to other persons in the house, as the case may be. So my opinion has undergone some modification, and I am inclined now to the belief that there is no such disease as idiopathic simple membranous inflammation of the larynx. I say I am inclined to this belief. I am not sure that it is true; but, as I formerly thought that the weight of evidence was in favor of their non-identity, I am now inclined, from my further experience, to think that the two diseases are really identical; that the so-called true croup is really diphtheria."

It will be seen further on, however, that this bias of opinion is sufficiently strong to make him willing to base his therapeutics upon it. "But, believing, as I now do," he says, in regard to diagnosis, only a few paragraphs after this modest disclaimer of positive decision of the question, "believing, as I now do, that all croup is but a local manifestation of the general disease, diphtheria, it would matter but little, as regards the diagnosis, whether the pharynx were the seat of membranous inflammation or not. . . . Holding the views which I now do, you will see at once that I should discard from the treatment of croup all those heroic remedies that were formerly regarded as indispensable,—leeching, mercurializing, antimonizing,—and I should advise you to treat it on the same principles as you would treat diphtheria with exudation commencing in any other part."

No comment is necessary as to the deference which is deservedly paid to the opinions of the distinguished man just quoted, especially in regard to this class of diseases, in his own country.

Not less clear and pronounced is the testimony borne by Dr. George Johnson, in the same number of the *Lancet*, in a paper on "Certain Points relating to the Etiology, Pathology, and Treatment of Diphtheria." . . . "I wish to express emphatically my entire concurrence in the conclusion long since arrived at by Bretonneau, Trousseau, and all

the leading French pathologists, that all cases of so-called croup which are associated with the formation of false membranes in the air-passages, are essentially diphtheritic; and, on the other hand, that what we in this country call inflammatory croup or catarrhal laryngitis never results in the formation of false membrane. It is surprising that practitioners of large experience can have any doubt upon this subject; yet we find even in some of the most recent English text-books that perplexing attempts are made to distinguish between what the authors call 'true membranous croup' and diphtheritic croup. The attempt is hopeless and most confusing to the student, for it is certain that membranous croup and laryngeal diphtheria, as we now see them, are one and the same disease. . . . If, as some writers suggest, there be a form of membranous croup which is neither the result of simple inflammation nor of the diphtheritic poison, I can only say that I have never met with the disease."

PHILADELPHIA, May 17, 1875.

TRANSLATIONS.

RHEUMATIC FACIAL PARALYSIS.—Prof. Erb, of Heidelberg, describes (*Deutsches Archiv für Klinische Medicin*) three clinical varieties of rheumatic palsy of the portio dura, essentially differing in severity, duration, and amenability to treatment. Electricity, the general therapeutic resource in this affection, he considers as affording also valuable aid in the diagnosis and prognosis; as the individual cases show striking points of difference in the behavior of the affected nerve and paralyzed muscles under the galvanic and faradic currents.

In a certain proportion of cases the electro-excitability of the nerve and muscles remains completely normal during the entire course of the disease; perhaps, on the second or third day, there is slightly increased sensitiveness, but it is transitory and shortly disappears; at no time is there any decrease in the qualitative or quantitative electrical reaction.

The electrical condition, in another set of cases, differs most characteristically from the preceding. The nerve, in a few (four to six) days after the onset of the disease, shows a rapid decline in its response to the application of the faradic and galvanic currents, so that soon after (ninth to twelfth day) the electro-motility is completely lost, and generally so continues until the return of some power of voluntary motion, when it slowly resumes its normal state. Meanwhile, important changes occur in the muscles; the faradic electro-muscular contractility lessens, until it finally disappears, as in the nerve; but though the susceptibility to the galvanic current sinks to a certain point in the first week, in the course of the next, or in the third week, it increases to far above the normal, and undergoes material qualitative changes: these anomalies disappear only very gradually and slowly. The clinical course of this variety assimilates the results produced by experimental destruction or division of the trunk of the facial nerve in animals, and the author, on that account, considers that when they occur, a complete degeneration, resulting in the loss of the electro-excitability of the nerve, is present, and that only with such an alteration would these characteristic changes occur in the muscles, which symptoms he groups, for this reason, under the title of the "degeneration-sign" (*Entartungsreaction*). Thus

is this form, which he terms the "severe form," in contradistinction to the first, characterized in a manner most marked and evident. Although it is not fully matured until the termination of the second or in the course of the third week, yet, if during the first, or at its end, a marked sinking of the farado-excitability of the nerve occurs, the subsequent changes may, generally speaking, be predicated with certainty, and the diagnosis made definitely between this and the light form in which the electrical condition is normal throughout.

The prognosis of the "light form" is absolutely favorable. In the course of three or four weeks recovery will take place, independently of treatment, and with or without electricity. This class of case is sufficiently large to correct the still prevalent but erroneous idea that the early application of electricity may change a light form of facial palsy into a severe one; it likewise controverts the opinion of C. Paul, that a facial paralysis that first comes under electrical treatment after the tenth day will be tedious and stubborn.

Experience teaches that in all those cases which show the "degeneration-sign," the prognosis is relatively an unfavorable one; the disease lasting from weeks to months, and, in many cases, after years have passed traces of the paralysis will be still evident in the features. This is properly termed the "severe form," and it is well, when treatment is commenced, to warn the patient of the possibility of a long duration of the disease. It is so much the more needful because we are unacquainted with any remedy that is in a position, with any certainty, to shorten materially the wearisome course of the disease, electricity *not* excepted.

Abundant experience, confirmed by careful observation, teaches, however, that exceptions occur, and that there is yet another class, which occupies an intermediate position between the two mentioned, in reference to the electro-dynamic changes and the duration of the disease. This "middle form" is characterized by the appearance of only an unimportant decrease, but never a complete loss, of the faradic and galvanic excitability of the nerve; whilst, apparently, the electrical condition of the muscles passes through the same changes as in the severe form. The prognosis of cases of this kind is also favorable; recovery follows in a few weeks, but not so soon as in the light form.

To distinguish these three forms in practice with any certainty, requires careful electrical examination. With the induced current, however, the severe form may be distinguished from the other two, at the end of the first week, by the material or complete loss of the irritability of the nerve. It is more difficult to pronounce between the others; but if the response to the current at the end of the first or beginning of the second week be positively though slightly reduced, the middle form is present; if it remain normal, we have to deal with the light form. The course of the succeeding week, at all events, will verify or correct the diagnosis.

In seeking for an explanation of the fact that in the mediate form such marked change may occur in the muscles without alterations in the nerve of corresponding gravity, the author refers to some physiological experiments made by Ziemssen and Weiss, in which the results were analogous to the symptoms occurring in this form. These observers found that a light contusion of the nerves caused a transient paralysis, which passed off in a few days, during which the faradic excitability of the nerve sank a little but was not lost, whilst the increase and qualitative changes occurred in the muscles just as in the cases of degeneration of the nerve. Unfortunately, the histological observations in connection with these experiments were never published.

The author next takes up the question as to whether it is possible to locate the exact anatomical position of

the nerve-lesion producing the paralysis. It is generally conceded that this cause is a peripheral one, that the nerve is affected after it leaves the brain, and from the fact that, soon after its exit from the stylo-mastoid foramen, the nerve breaks up into the facial branches, all of which are generally involved in this disease, it is considered that the nerve must be affected in the Fallopiian canal or in its immediate vicinity. He then takes up in succession the different branches given off at known intervals from the nerve; and, since destruction or disease of the nerve-trunk at any one point would cause paralysis of the branches below that point without involving those above, he proceeds to consider the probability of determining the site of the lesion in any individual case by means of the participation, or not, in the paralysis of these different branches of the nerve.

This leads him into a discussion of the function of each branch, and into quite an extended and interesting one in reference to the anatomy of the chorda tympani nerve. After carefully reviewing the question and referring to numerous recorded cases, he concludes that the weight of testimony is in favor of Schiff's view: that the filaments of the chorda tympani, after being received by the trunk of the facial from the lingual, apparently pass out again from the facial at about the level of the geniculate ganglion (*intumescencia gangli-formis*) and return to the trigeminus, apparently, by several routes (greater superficial petrosal nerve, sphenopalatine, and otic ganglia, etc.), and, with its trunk, return to the brain. What in detail these routes are in the human economy does not seem to be sufficiently established: apparently, individual peculiarities exist; it is possible that in some a part of the fibres take a peripheral course and return to the trigeminus by means of the inosculation existing between a branch of the facial and the auriculo-temporal branch of the fifth. This would appear to have been the condition in two surgical cases, where, after extirpation of the parotid gland, some impairment of taste appeared in the anterior two-thirds of the corresponding half of the tongue; however, as it is not stated how soon this occurred after the operation, it may have been due to an acute neuritis ascendens of the trunk of the facial, which secondarily involved the chorda tympani.

He concludes that in many cases of facial paralysis it is possible to locate the lesion approximately, although it is evident that such a pathological process would not necessarily be limited to one point, but might, in the course of the disease, extend along the nerve, or even affect a considerable portion of it, so as to give the appearance of being localized in several spots. From numerous observations, however, he draws the following practical deductions:

1. Disease of the nerve-trunk outside of the Fallopiian canal will give the following symptoms: paralysis of the nerves of expression without involvement of the posterior auricular branch, or disturbance of taste or hearing, or the salivary secretion, or the position of the soft palate, etc. In exceptional cases impairment of taste may occur from the centrifugal course taken by the filaments of the chorda tympani, as before mentioned.

The cases of the "light form" belong probably to this class, and therefore, in making the prognosis, special attention should be given to the condition of the posterior auricular nerve (distributed to the *occipitalis retrahens auriculæ*, etc.).

2. Disease of the nerve in the Fallopiian canal, but below the point of entrance of the chorda tympani, is shown by palsy of the features and of the posterior auricular nerve without affecting taste, etc.

To this class the greater number of the cases of the severe form appear to belong.

3. Disease of the nerve between the chorda tympani

and the stapedius is characterized by paralysis of the external branches and posterior auricular, with anomaly of taste in the anterior two-thirds of the corresponding half of the tongue, but no trouble of hearing, etc.

4. Involvement of the trunk of the nerve from the stapedius to close under the geniculate ganglion adds to the foregoing diminished action of the salivary glands increased sensitiveness in the hearing for high notes (*hyperacusis*, *oxyokoia* of Wolff), but no irregularity of the soft palate.

5. When the disease affects the locality of the ganglion itself, the point of departure of the greater superficial petrosal nerve, which, besides the major portion of the filaments of the chorda (on their route to the trigeminus, by way of Meckel's ganglion), carries the motor fibres for the palate, there is paralysis of all the external branches, impaired taste, and salivary secretion, abnormal sensitiveness of hearing, and lateral deflection of the palate. This is the only point at which these two bundles of nerve-fibres come in contact with each other.

6. A lesion above the ganglion, between it and the brain, would affect all the external and internal branches, as just above described, except that there would be *no* impairment of taste. Some few cases of this character have been reported by Ziemssen, Landowzy, Romberg, Bucklinmaier, and the author.

Prof. Erb remarks that these observations are not only available in determining with some certainty the seat of the lesion in facial palsy, but also would render valuable aid, from the involvement of the *portio mollis* and other nerves at the base of the brain, to the differential diagnosis of diseases of the neighboring organs, in similar affections of the middle ear, the mastoid and petrous portions of the temporal bone, the parotid gland, etc.

As to the relative frequency of these different varieties, the author arrives at what he considers a no less conclusive than striking result. In thirty-five cases coming under his own observation, twenty-three occurred in which, beyond paralysis of the external branches, no further symptoms were present. These cases, therefore, pointed to a lesion below the junction with the chorda tympani. Four cases belonged to class two; five to class four; a single one existed where the level of the ganglion was the seat of the trouble; and two cases, finally, belonged to class six.

The proportion of cases belonging to the first group is, apparently, from the literature of the subject, in reality even larger than the above would indicate, as the cases of facial paralysis without accompanying symptoms are certainly much more seldom reported than those in which they do appear.

It would hence appear that rheumatic facial paralysis is an affection which, as a rule, involves the nerve-trunk below the chorda tympani,—*i.e.*, at the lower end of the Fallopiian canal, or immediately outside; and which, in a certain number of cases, extends to the chorda and the stapedius, more rarely to the geniculate ganglion, and only exceptionally, or never, affects the nerve-trunk at the base of the skull. Following the general view that such rheumatic processes are usually of the nature of a light inflammation of the neurilemma, we would then consider this disease as a neuritis facialis, limited, as a rule, to the nerve at its point of exit from the stylo-mastoid foramen, or its immediate vicinity, and which may ascend more or less far along the nerve in the Fallopiian canal. The narrowness of this passage will then easily explain how an inflammatory swelling of the nerve-sheath, insignificant in itself, so frequently leads in this situation to such injurious compression and obstruction of the nerve as to find its clinical expression in the "degeneration-sign."

The author thinks that the "light form" has its

cause outside of the Fallopian canal (class one), and hence the nerve is free from the strong compression and its serious results. If the nerve be affected just inside the foramen, the "severe" or "middle" form appears according to the amount of the unavoidable compression. This would seem to be confirmed by the author's experience, as in all his cases where he suspected the presence of the severe form, the posterior auricular branch was found to be involved.

If the preceding views are correct, electricity affords a convenient means of determining more exactly the position of the exciting cause of the paralysis. If the electro-motility is unaffected (light form), the disease is to be sought for outside of the stylo-mastoid foramen; on the contrary, if the "degeneration-sign" appears (middle and severe form), then the pathological process is located inside of the Fallopian canal, and the prognosis will depend upon the amount of injury suffered by the nerve, as indicated by its behavior under electrical stimulus. F. W.

VICES OF CONFORMATION OF THE ANUS.—At a meeting of the Société des Hôpitaux, M. Verneuil reported upon two observations presented by M. Deleus relative to malformations of the anus. In the first of these cases the anus presented two orifices separated by a vertical septum; one of these led into the rectum, while the other terminated in a cul-de-sac in the pelvis. Excision of this septum was performed.

M. Verneuil added to this observation the following one: an infant five months old, having some difficulty in defecation, was sent to the Lariboisière. Having ascertained the presence of a raphé proceeding from the scrotum and separating two orifices which led to a common anus, the surgeon made an incision, and found a stricture of the rectum, which was remedied by the daily introduction of the finger as a dilator morning and evening. After a few months, dilatation was complete, only two small tubercles remaining on the anterior and posterior walls. M. Deleus' second observation related to a young child with imperforate anus. The operation was performed immediately, and was facilitated by resection of the coccyx. The cure was rapid, but three months later prolapse of the rectum took place, which seemed irreducible. This prolapse may have been due to taking away the support of the sphincter, but Dr. Verneuil, who had performed a similar operation several times successfully, believed it due to bad hygienic conditions.—*Bull. Gén. de Thérap.*, April 30. X.

SUDDEN DEATH FROM PAIN IN A WOMAN WITH HYDATID CYST OF THE LIVER.—At a meeting of the Société des Hôpitaux (*Bull. Gén. de Thérap.*, April 30), M. Desnos read an account of a case occurring under his care at the Hôpital Necker, in 1865.

The patient had a very voluminous hydatid cyst of the liver, for which, without previous puncture, the Vienna paste was applied.

The evening following this application the woman died suddenly, and at the autopsy no trace could be discovered of either peritonitis or of perforation of the cyst; clots were found in the heart. It was evident that the woman had succumbed to a syncope provoked by the intense pain caused by the caustic,—a syncope superinduced by the profoundly cachectic condition of the patient. M. Desnos compared this case to one reported by M. Martineau, which differed, however, in the fact that death was brought about by an intense pulmonary congestion. This difference perhaps depended upon the circumstance that in M. Martineau's case the pneumogastric nerve was touched directly, while in that of M. Desnos the effect was upon the nerves of the life of relation. X.

CASE OF COMPLETE INVERSION OF THE UTERUS.—Dr. S. Voelkel contributes the history of such a case to the *Berliner Klin. Wochen.*, March 15, introducing it by a few remarks relative to the comparative rarity of the accident.

Partial inversion is frequently reported in the medical journals; but complete inversion, especially occurring so long after confinement as in Dr. V.'s case, is seldom met with.

Dr. Voelkel's patient was a healthy primipara, 32 years old, whom he had delivered, after a somewhat protracted labor, by means of the forceps. There was some slowness in contraction on the part of the uterus, but by proper management the placenta was expelled, and the uterus contracted satisfactorily, remaining in good condition for two days. At the end of that time Dr. V. was summoned in great haste, and found the uterus exposed to the air, completely inverted, and the patient nearly dead from hemorrhage. Application of the proper remedies, stimulants, etc., was made, and the patient subsequently recovered. X.

POISONING BY POPPY-HEADS IN AN INFANT CURED BY INJECTION OF COFFEE.—Dr. Kobryner communicates the following case to the *Bull. Gén. de Thérap.*, April 30. He was called to see an infant scarcely three weeks of age, to whom its mother had administered an infusion of poppy-heads with the view of procuring sleep. The child lay pale, immovable, the pupils strongly contracted, almost effaced; the extremities cold; the lips cyanosed. The radial pulse was imperceptible; auscultation alone showed that life still existed. Syrup of ipecac, given by the mouth, failed to produce vomiting. Strong infusion of coffee was then injected into the bowel, while sinapisms were applied to the arms and legs. This procedure was continued for some hours before the little patient showed any sign of life. Finally, however, the pulse reappeared, the cyanosed condition diminished, and eight hours after the commencement of the treatment the child was out of danger.

The quantity of infusion of coffee injected during this period amounted to six pints, at least five pints of which were retained. The following day the child appeared as well as before the accident. X.

VACCINATION WITH FATAL RESULT.—Krügkula (*Wien. Med. Wochenschr.*, No. 47, 1874) inoculated eight soldiers with vaccine lymph from a foundling-hospital. In two there was no result. In the other six, in whom the vaccine pustule became quickly developed, there occurred chills within twenty-four hours, followed by high fever, weakness, and delirium.

Two to four days after the vaccination, phlegmonous inflammation of the upper arm appeared, in some on one arm, in others on both, which, after a few days, became gangrenous. Two patients were cured, four died. From the same source nine vials were filled with vaccine virus, the use of which caused no evil effects.—*Centralblatt*, March 13. X.

BROMIDE OF LITHIUM.—M. Rouband draws the following conclusions from his investigations of this drug. Bromide of lithium, as a medicine, has a double effect. It possesses, in a high degree, those lithotropic properties attributed to the salts of lithia, and, in addition, like other bromides, affects reflex sensibility most energetically. It has not, however, the inconvenient action on the heart displayed by bromide of potassium. Consequently, its place in therapeutics is in the first rank among lithiatics and among sedatives, and its action is particularly valuable in the uric acid diathesis, which is accompanied by painful symptoms, and in neuroses which are so often complicated by the presence of uric acid.—*Bull. Gén. de Thérap.*, April 30. X.

PHILADELPHIA
MEDICAL TIMES.
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 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

WHY IS IT?

THE Medical Department of the University of Pennsylvania is over one hundred years old, and its professors during the century have filled the world with their personal fame, and made the name of their institution respected wherever learning bears honor. The Scientific Department of the same university was born just three years ago, and, able and learned as are its faculty, is of course comparatively unknown.

The Medical Department of the University, save only in the cabinets which have been bestowed upon it by its professors, is as poor as it was on the day of its birth, not having accumulated one dollar of endowment during a century of most flourishing life. The Scientific Department of the same institution has, during its brief life, obtained immediately available endowments amounting, it is believed, to nearly half a million of dollars, and reversionary rights in estates which, it is said, will be worth in a few years as much more.

Surely this contrast ought to make every lover of medical progress, every believer in his profession, pause to discover why it is.

The reason which we have frequently heard assigned is, that the community is given up to the worship of the mechanic arts and applied science, and does not care for medicine or its interests.

This answer may seem at first plausible, but it is really no better than the complaint of the poor artist, that "the world does not appreciate him." The

world cares for nobody, but the world does care for whatever is of value to it; and if this or any other community does not appreciate the medical profession it is because the profession is of no value to it.

It is folly for the profession, and especially for the medical colleges, to account for failure by blaming a community. Just so soon as any one paints good pictures, men will desire them. Especially is it folly in such an institution as the Medical Department of the University of Pennsylvania to lay its poverty to the indifference or niggardliness of a community which has given millions for every conceivable object of charity. Folly, when we recall the towering influence in this community of such men as Rush, and Physick, and Morton, and Parrish, and a host of others, living and dead, who have been connected with this medical department. Folly, under the light of the recent success of a few of the alumni and the professors in raising nearly three-quarters of a million in three or four years for a University hospital.

Instead of looking upon the outside, and laying the blame there, it were better to look upon the inside to find why it is the Medical Department has been so neglected. In doing this, let us also not lose sight of the fact that the Medical Department of the University is simply the type, as she is the mother, of American medical schools: *ex uno disce omnes*.

In an ordinary institution for higher teaching, the theory of constitution is that education is a sacred duty of the community to its members, but can never be made to pay, and must, therefore, be supported either by State aid or by endowments. Unfortunately, or perhaps fortunately, in this country public opinion has generally been opposed to State aid to the highest institutions of learning,—the theory, apparently, being that all citizens should be brought by the State to a certain level and then left to themselves. Public-spirited individuals are more and more supplying this lack of State aid by gifts and legacies amounting in the aggregate to enormous sums. Now, we conceive that the ordinary medical college is so essentially different from other educational institutions in its organization that it can never be classed with them as an eleemosynary institution or attract endowments; and that this is the only reason that none of our medical schools have ever obtained any endowment in this country.

A number of medical gentlemen get together, apply to the Legislature for the right of giving a medical degree, and then produce an annual crop of doctors. Such is the brief history of the rise of a medical school. There are two distinct functions

performed by its professors,—educating in medicine, and giving the right to practise medicine. It is not the first of these that the average student cares for solely, or even chiefly; it is the second that he wants.

If any man doubts this, let him ask himself how many students would any institution get which simply taught medicine and did not give a degree.

It is plain that the medical institution holds a valuable franchise from the Legislature, and expects to make the degrees pay for the medical teaching. The faculty is therefore pretty much on the platform of a firm united together for the purpose of profit. In an institution like Bellevue Medical College, where the faculty is self-appointed, the parallel is exact. In the University or the Jefferson Medical College, the only difference is that the firm has for its supposed advantage given up the power of selecting its own members. Under these circumstances it would be absurd to expect philanthropists to give money to endow medical institutions: as well might they add to the capital of Wanamaker & Brown, P. T. Barnum & Co., or any other combination of men engaged in a laudable effort for gain.

In order to bring the medical colleges into their proper sphere of being simply schools of learning, the various Legislatures ought to take away their power of giving the right to practise, by creating State Examining Boards. But the colleges have it in their own power to place themselves in a position to obtain endowments without any legislative aid. Let them reform medical education by lengthening their courses and raising their standards, and then say to the public, "Medical teaching, properly carried out, can never be self-supporting; we appeal to you for endowments." If this were done, and the enormous influence the profession wields in the aggregate brought to bear, American medical colleges would lead the van, and would not be a by-word and a scoff among the institutions of learning.

CORRESPONDENCE.

BALTIMORE, May, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—It is generally well known that we have in this city two corporations, known to the law as Johns Hopkins Hospital, and Johns Hopkins University. Mr. Hopkins endowed these two institutions with about six millions of dollars, and ever since his death considerable interest has been shown as to the manner in which the two boards of trustees intend to carry out the designs of the donor. The Hospital Board purchased the building and grounds of the old

Maryland Hospital for the Insane, demolished the building, piled up the bricks, and rested from their labors, so far as the public could see. This does not necessarily imply that nothing is doing, for we understand that thorough examinations have been made of the principal hospitals in this country and Europe, so that a plan combining all the latest scientific improvements may be selected. It is said that the preparation of a plan is far advanced, and that we may soon expect the buildings to be erected. The University has not progressed very far. Prof. Gilman, of the University of California, has been selected to preside over our new institution. He has been in the city for some weeks past, and a temporary home for the University has been purchased, at a cost of \$75,000, on Howard Street, adjoining the new City College. It is said that a proposition has been made to raise the grade in the City College and place it under the University as one of the under-graduate schools. I asked a prominent medical gentleman when he thought the new University would go into operation. He said that "forty generations of worms will feed upon the body of Johns Hopkins before a student enters the doors of the Hopkins University."

There has been much discussion in the papers concerning the character of the proposed school. Because Mr. Hopkins made provision for the gratuitous education of a certain number of students from Maryland, Virginia, and North Carolina, many contend that the course of instruction should be the same as that of our ordinary colleges. We have several colleges of low grade, in which there are free scholarships, and it would seem to be useless to add to the number. The magnificent endowment of the Hopkins University places it in the power of the Board of Trustees to establish an institution which may be a credit to the State and nation. With the funds at their disposal they can command the best men of the country, if not of the world, to fill its chairs; and if the chairs are so filled the students will come. Of low-grade schools and so-called colleges the country has more than enough; of high-grade schools and real universities it has too few. Properly established, there is nothing to hinder the Hopkins University standing at the head of American educational establishments and rivalling those of Germany. As yet, there has been nothing done in regard to the schools of law, theology, medicine, etc. The main question has been to decide whether it shall be an under-graduate or a post-graduate school; whether professors shall be employed on account of their ability to hammer a "little Latin and less Greek" into unwilling college boys, or whether men of established reputation shall have an opportunity to teach their specialties to men capable of understanding and appreciating the instruction. The medical department, if favoritism does not control the selection of the professors, with the Hospital and Convalescent Home as clinical fields to supplement the didactic lectures, ought to become the leading college of the country and afford as good opportunities for obtaining a thorough knowledge of

medicine in all its branches as London, Paris, Berlin, or Vienna.

President Gilman desires the university to be *the* school of the country, and it is to be hoped that nothing may prevent him accomplishing his desire in this respect.

Baltimore is celebrated for the neglect given to sanitary matters. Dickens must certainly have had us in mind when he sketched the "Circumlocution Office," or "how not to do it." For two summers we have endured the intolerable stench of the basin, and it now begins to infect the air. Many plans have been proposed for abating the nuisance (filling up, pumping out, flushing, emptying disinfectants into it), but our city fathers have not advanced beyond the talking stage. And, as if the basin was not enough, we are still blessed with the night-artillery and the bucket-brigade. By what means a thousand men can rule a city of three hundred thousand, and make it endure the vilest odors, is unknown to me, but of the fact we are, alas! convinced. Bah!

Yours, etc.,

MEDICUS.

NEW YORK, May 24, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—In the *Times* for May 22, 1875, p. 536, you announce the discovery by Hoppe-Seyler of urobilin among the products of decomposition of blood coloring-matter. This was discovered by myself, and announced two years ago ("Guide to Urinary Analysis," p. 24, note, New York, 1873), as follows:

"As these pages are passing through the press we have met with spectroscopic evidences corroborating the view that the urine-pigment is a derivative of the coloring-matter of the blood, by the discovery, in a solution of decomposing hæmoglobin, of a broad but distinct band of absorption between the Fraunhofer lines *b* and *F*. This line appears to be identical in position and character with the band discovered by Jaffe (*Virchow's Archiv*, B. 47) in urine and in solutions of urobilin. In the solution of hæmoglobin referred to, the new band was accompanied by the two oxygen blood-bands (between *D* and *E*), and also by the methæuoglobin band (between *C* and *D*). This association gave a four-banded blood-spectrum, differing from any that we can find on record, and the composite nature of which was evident."

Respectfully, H. G. PIFFARD, M.D.

IRRIGATION OF THE BLADDER.—Dr. Rose, of New York, calls attention, in the *Medical Record* of May 8, to Zeissl's method of introducing liquids into the male bladder without the use of the catheter. The plan is to fit the point of an irrigator into the mouth of the urethra, while the patient is placed on his back, with raised nates, the penis being stretched along the abdominal walls. By the employment of this method Dr. Rose was enabled to inject the bladder with a solution of tannin, having introduced a glass tube into the urethra and connected it with a fountain syringe, which was raised to the height of four feet. Previous attempts to wash out the bladder by means of a catheter had been unsatisfactory.—*Boston Medical and Surgical Journal*.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 25, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

Multiple hernia.

DR. DE F. WILLARD presented the specimen, which was obtained from A. B., a woman *æt.* 40. She has had femoral hernia for eight years, wearing a truss, and suffered no serious inconvenience until 6 A.M. on the 27th of January, 1875, when she found that the intestine had protruded and could not be returned. Pain commenced about 8 o'clock, soon after which unsuccessful efforts at taxis were made by a physician. She was admitted to the Presbyterian Hospital at 1 P.M. on the same day. Dr. H. Lenox Hodge attempted reduction, both before and after drawing off the gases, by an aspirator, but both efforts proved unavailing, and by 9 P.M. the loop of intestine had again become greatly distended. The pain, vomiting, etc., became more and more serious, and at 1 A.M. the ordinary operation for the relief of strangulated femoral hernia was performed by Dr. H. It being necessary to open the sac, the bowel was found deeply congested, but its vitality was good, and it was carefully returned into the cavity of the abdomen.

The patient reacted well, but in twelve hours tympanitis appeared, the pulse became rapid and feeble, while nausea, vomiting, and the usual symptoms of peritonitis soon supervened.

Upon the second day she aborted of a two-and-a-half months' *fœtus*,* after which the symptoms grew rapidly worse until she died, about forty hours after the operation.

Upon examining the cavity of the abdomen, a small amount of effusion was found present, but the existence of general peritonitis was evidenced by lymph glueing together all the intestines and covering in the uterus. The loop of intestine was still in the bent condition in which it was returned, being held loosely by soft lymph, but its calibre was perfectly patulous, and, though congested, it was not at all gangrenous. The internal crural ring was blocked by a mass of fresh lymph, but bore no evidence of being the centre of inflammatory action.

Upon examining the opposite side, it was found that a large loop of the omentum had passed through the left internal abdominal ring, and was fastened in the canal; while at the thyroid foramen existed another epiplocele, the omentum having passed out alongside the obturator vessels to the extent of one and a half inches.

Dr. W. G. PORTER said he was present at the operation. Great efforts were made to reduce the hernia without opening the sac, but this was impossible, and, on opening the sac, numerous adhesions were found.

Cystic medullary cancer of testicle.

Dr. W. S. FORBES presented the specimen, from a man aged 54 years. The patient related that, two years and five months prior to his entrance into the Episcopal Hospital, he had fallen in a fit, and that a few days after the catastrophe his scrotum began to enlarge, and that in a short time it was as large as when the operation for removal of the testicle was performed a few days ago.

On examination, the scrotum measured eleven inches

* This accident was entirely unlooked for, as she had been a widow for five years.

in its vertical or long axis, and eight inches transversely. It presented the appearance of a large hydrocele. The upper half of it was translucent, and the lower part opalescent and thick. The man was very much out of health, and very despondent. There was strongly suspected a diseased testicle at the lower part of the mass. In a short time the opacity of the tumor extended over two-thirds of the scrotum. It was concluded that there was a condition of cachexia, as a consequence of which a blood-vessel had ruptured into the sac, producing the appearance so well described by Percival Pott as sometimes occurring when the walls of a hydrocele become much distended.

On tapping the tumor, very little blood and very little water were drawn off through the canula, although the instrument could be moved about with great freedom, imparting the sensation that would be given in moving it through clots of blood, which strongly suggested hæmatocele. The patient was advised to have the tumor removed, to which he readily assented.

At the consultation with his colleagues, Dr. F. stated his belief in the existence of hæmatocele complicated with malignant disease of the testicle.

On opening the mass, a large quantity of blood and water escaped from the cyst at the upper part, and the testicle was found in the lower part as large as a large orange, and presenting the appearance of medullary cancer.

The history of this case seems to be this: that the man bruised his testicle in the fall he had more than two years ago, that hydrocele was rapidly developed, that the injured testicle was attacked by malignant disease, and that there was ruptured a blood-vessel by distention, giving rise to the opacity in the fluid in the cyst some weeks ago.

The peculiarities of the case are that the patient should have lived over two years with this malignant disease, and that there should have been no metastatic complication, for every other portion of his body appears to be healthy.

The PRESIDENT said he presumed that, as usual, the character of the patient was such that the history could not be relied upon. He thought it quite likely that a large blood-clot had formed, from which the organic parts became removed, and a cystic transformation of the clot occurred. Such a history as this he thought not improbable.

Dr. FORBES replied that not only was this the man's story, but that his wife also insisted upon its accuracy. He had himself no doubt that a decided change had taken place in the tumor since the man fell in convulsions, and also that the testicle was injured at that time; and the growth was, moreover, evidently not recent. It is generally the characteristic of medullary cancer that it grows rapidly, that it is then, perhaps, stationary for a time, and that it finally again grows rapidly, carrying off the patient. From the man's family he could get no other history than that the tumor had been as large for two years as on the day it was removed.

The PRESIDENT asked whether the patient was epileptic.

Dr. FORBES replied that he was not.

The specimen was referred to the Committee on Morbid Growths, which reported, April 8, 1875, as follows:

"In Dr. Forbes's tumor of the testicle we find, upon microscopical examination, large oval alveoli, filled with nucleated epithelial elements; the latter are seen in the various stages of fatty metamorphosis. There is no cylindrical arrangement indicating the presence of any remaining seminiferous tubules, nor is there any proper intercellular substance. The growth is a medullary carcinoma."

Enormously enlarged spleen.

Dr. W. G. PORTER presented the specimen, from Mrs. H., white, United States, married, about 40 years of age, mother of five children, the youngest now seven years of age. She always enjoyed good health until 1865, when she went to Norfolk, Virginia, where she contracted a very obstinate form of malarial fever, for which she could never be induced to submit to regular treatment. She never would take quinine, or, in fact, medicine of any kind for any length of time. About 1868 she had a fall, when she felt, as she expressed it, "something give way," and soon began to feel pain in the left side in the region of the spleen, which was accompanied by acid eructations, and considerable gastric and intestinal disturbance. Soon afterwards, a tumor was noticed in the epigastric and left hypochondriac regions, which gradually increased in size until it filled the whole abdominal cavity. About eighteen months ago she was examined by Dr. F. J. Buck and Dr. John S. Parry, of this city, who pronounced the tumor to be an enlarged spleen. She was treated locally by the biniodide of mercury ointment, and the bromide of ammonia internally. Before and since that time she had been treated by many regular physicians; also by homeopaths, and every other variety of quacks; several of whom pronounced it to be an ovarian tumor, and one of whom assured her that the tumor was ovarian, and was very anxious to remove it, assuring her that he could remove it almost without her feeling it. On Friday last, she not only attended to her household duties as usual, but visited an administrator of oxygenated air, who promised to cure her in two weeks. She also attended a furniture-auction, and was on her feet the greater part of the day. On Saturday she complained of great abdominal pain and some difficulty of breathing, which was greatly increased by the recumbent posture.

On Sunday night Dr. Porter saw her for the first time, and found her sitting propped up in bed with pillows, complaining greatly of pain in the abdomen and a feeling of tympanitic distention. Her stomach was very irritable, and she had vomited large quantities of a greenish, bilious-looking fluid. She was much emaciated and thoroughly anæmic. The pulse was weak, and she was evidently extremely ill. Morphia was administered hypodermically, followed by hot applications to the feet and brandy and chlorodyne by the stomach. The anodynes had but little effect in relieving the pain, and on the following day she died.

Autopsy, thirty hours after death.—Body extremely emaciated; abdomen very much enlarged and distended. On opening the abdomen, it was found to be almost entirely filled by a large tumor which lay immediately under the peritoneal coat of the abdominal walls and in front of the intestines. On lifting it up, it was at once seen to be the *spleen*. There were no adhesions between it and the abdominal walls. The weight of the organ on removal was found to be *twenty-one pounds*.

The PRESIDENT said the spleen was the largest ever presented to the Society, and asked Dr. Porter whether there were any adhesions, to which the doctor replied that there were none.

The PRESIDENT said the exhibition of such a tumor brings up the question of extirpation of the organ involved. The absence of adhesions observed here is frequently observed in connection with malarial disease; the changes in the peritoneum being limited usually to capsular thickening. When the organ approaches at all near the size of the present one, treatment has been heretofore an entire failure, and this has been so well recognized that the possibility of extirpation has often been discussed, and the operation actually performed in several instances. As to other forms of

treatment in less advanced cases, hypodermic injections of ergotin seem to have some influence over the contractile element of splenic tumors, though more evidence is needed before the value of this treatment can be determined. He had recently a case of leucocythæmia under observation where there appeared to be a temporary diminution of bulk under this mode of treatment. All treatment by external inunction and internal use of quinine is successful only in comparatively small degrees of enlargement. He would be glad to hear an expression of opinion, with regard to the propriety of operation, from the surgical members of the Society.

Dr. JOHN ASHHURST, JR., said that it was, of course, well known that splenotomy had been performed with success in *traumatic* cases, but no instance had, he believed, occurred, at least in modern times,* in which success had attended the operation when performed for such a condition of the organ as was exhibited in the specimen on the table; death having, indeed, in these cases usually followed in a short time from hemorrhage. In view of such a history as had been read this evening,—the patient carrying this enormously enlarged spleen for years with comparative comfort, and being able to attend to her ordinary avocations,—the surgeon who should propose to operate would, in Dr. A.'s judgment, assume a grave responsibility. The probability of relief from such an operation was so small as to be totally incommensurate with the risk to life.

Dr. FORBES asked to know the relative size of the artery and vein.

Dr. PORTER replied that they had not been examined to this end, and he could not answer, but the vessels remained attached to the tumor, and could be examined.

Dr. R. M. BERTOLET said that if this huge organ was an *ague spleen*, as had been suggested, he thought it of a rare type, as we usually have more thickening of the capsule than is here found. He thought it remarkable that the organ with such a thin covering did not rupture long before it had attained its present size. Another reason against its being a mere *ague spleen* appeared in the light color it presented instead of the dark pigmented hue of the *ague spleen*. He was also impressed by the waxy appearance of its cut surface and the translucency of its edges, and asked whether the iodine test for amyloid degeneration had been applied.

The PRESIDENT said that he also had been struck with the points alluded to by Dr. Bertolet, particularly as to the translucency of the edges and the absence of capsular thickening, but he was deterred from mentioning them by the fact that the other viscera were uninfluenced. Further, such extreme enlargement of an albuminoid spleen is rare, while there was also the history of persistent malarial disease previous to the appearance of a tumor. The freedom from suffering

and the long maintenance of activity were as remarkable as anything else in the case. In other cases of extreme enlargement, he had observed considerable suffering and great impairment of general health. He shared Dr. Ashhurst's opinion with regard to the impropriety of operating, to a great extent.

Dr. PORTER said that it had changed color since its removal, when it was much darker in hue. It had been preserved in a fluid containing a mixture of salt and saltpetre. The tumor was not diagnosed as an enlarged spleen until eighteen months ago, and Dr. Parry, who made the diagnosis at that time, is now out of town, and no further history could be obtained.

The specimen was referred to the Committee on Morbid Growths, which reported as follows, April 8, 1875:

"The monstrous spleen, presented by Dr. Porter, does not respond to the tests for amyloid reaction. Fresh microscopic sections show the presence of much black pigment-matter in all the splenic tissues. The Malpighian bodies and trabeculæ are not appreciably hypertrophied; the hyperplasia seems to consist solely in an aggregation of blood-corpuscles (chiefly red) in the cavernous sinuses or pulp-substance of the spleen."

Mammary cancer.

Dr. JOHN ASHHURST, JR., exhibited a specimen of mammary cancer, removed a few hours previously from a married woman, 43 years of age. The right breast was the one affected, and the patient, who had borne several children, attributed the formation of the tumor to a blow which she had received upon the part. The disease had lasted about one year, but had been a source of suffering for only four or five months. The nipple was much retracted, partly on account of a previous mammary abscess, and the skin over the growth was becoming adherent, but there were no deep adhesions and no glandular implication. The mass was removed through an oval incision, care being taken to cut wide of the diseased structures and to remove with the tumor much of the surrounding subcutaneous fat.

Latent cirrhosis of kidneys without albuminuria or dropsy; hypertrophy of heart; dyspnoea; sudden death.

Dr. WILLIAM PEPPER presented the heart and kidneys from a case of latent Bright's disease. The patient was a young woman, æt. 27 years, whose appearance always indicated full health, with some tendency to plethora. It is not known that she ever had scarlatina, and no symptoms had ever attracted attention to the kidneys. For some years past, occasional dyspnoea had been noticed, which grew much more severe last fall, when it became constant, and much increased on exertion. She also had occasional violent paroxysms of orthopnoea, resembling attacks of spasmodic asthma, and usually at night, and, on several occasions, hæmoptysis occurred. The secretion of urine was abundant, of light color, and rather low specific gravity; it was carefully examined several times, but no albumen or tube-casts were found. The breathing was very frequent, and there were frequently signs of marked pulmonary congestion. The action of the heart was habitually rapid, but was readily kept under control by moderate doses of digitalis. Physical examination showed a considerable degree of hypertrophy, chiefly of left ventricle. While under treatment, several severe nocturnal paroxysms occurred; and, finally, after having enjoyed an unusual degree of comfort for several weeks continuously, she was seized with symptoms of intense dyspnoea soon after retiring one evening, followed in a few minutes by insensibility, purplish suffusion of face, and death.

At the autopsy, extreme cirrhosis of both kidneys was found; the organs being reduced to about one-third

* This sentence perhaps requires some explanation. Dr. Otis, U.S.A., the able surgical historian of our late war, has, in the forthcoming second volume of the Surgical History (the advance-sheets of which I have had the privilege of inspecting), collected twenty-six cases of splenotomy, of which only six are said to have terminated fatally. Sixteen cases, in which the operation was performed for *traumatic* causes, all terminated successfully. Of the other four cases in which death did not follow, one belonged to the first half of the sixteenth and one to the first half of the eighteenth century; in the third (Dorsey's) the spleen does not (according to the report in Eve's "Remarkable Cases in Surgery") appear to have been actually removed, but, its adhesions having been broken up, to have been placed "as nearly as possible in what I [the operator] conceived to be its natural position;" while the fourth was Péan's famous case, in which a cystic spleen was removed under the impression that it was an ovarian tumor. Six cases have come to light since Dr. Otis's table was printed, of which four (traumatic cases) are said to have resulted favorably, and one in death, while the termination of the sixth has not been published. Thus, there appears to have been no case reported, during the last one hundred and fifty years, of successful splenotomy for leucocythæmic or malarial disease, while there have been, during the same period, at least seven cases in which the operation performed under these circumstances was the immediate cause of death.—J. A., Jr.

their normal size. There was intense venous congestion of all the abdominal organs. The *lungs* were deeply congested, but no apoplectic clots were found. The *heart* was much hypertrophied, the walls of the left ventricle being especially affected. The valves were competent, but the leaflets of the mitral were thickened and somewhat too rigid. The right ventricle was not much enlarged, and its full expansion seemed checked by a delicate band, which passed from about the middle of the septum to the outer wall. There were traces of old pericarditis.

Dr. J. H. HUTCHINSON remarked that some years ago he had exhibited two kidneys which had undergone even greater contraction than had taken place in those just presented by Dr. Pepper, the smaller weighing only seven drachms. The patient, an unmarried woman of about 30 years of age, was admitted into his ward at the Pennsylvania Hospital for a slight disease of the skin. Shortly afterwards, most distressing dyspnoea set in, and continued until the occurrence of death, in less than twenty-four hours after the seizure. Owing to an oversight, the urine was not examined during life, but that which was removed from the bladder after death was found to be highly albuminous. Dr. H. afterwards learned, from the gentleman in whose house she had lived for some time as a servant, that she had apparently always enjoyed good health, and that she had at no time presented symptoms which could be referred to disease of the kidneys. He had known of other cases in which distressing dyspnoea appeared to be dependent upon cirrhosis of these organs and was almost its only manifestation.

Dr. DE F. WILLARD said, with regard to the absence of albumen from urine, he was called last summer to a girl who had not passed water for thirty-one hours, and was suffering from uræmic convulsions. He removed a small quantity by the catheter, but found, on examination, that it was non-albuminous, and without tube-casts. The girl died in three hours. He made a post-mortem examination, and found both kidneys extremely contracted, both smaller than those presented to-night. He re-examined the urine drawn by the catheter very carefully, and found neither albumen nor casts. He could learn little of her previous history (she was a prostitute), but it was said that she had Bright's disease. He had previously seen specimens of urine in which a single examination had failed to point out the presence of albumen, which was subsequently found present.

Dr. JAMES TYSON remarked that the cases just quoted illustrated the form of Bright's disease in which it was well known that albumen is present in minimum amount, and, according to some excellent authorities, sometimes altogether absent. He was confident it was sometimes overlooked when present in very minute quantity, and he desired to call the attention of the members to the extreme delicacy of the so-called Helier's test, in which some urine is either placed in a test-tube, and nitric acid allowed carefully to descend the side of the glass until it underlies it, or, what amounts to the same thing, but is perhaps a little more easy of performance, placing some acid in the tube first, and allowing the urine gently to fall upon it, when, if albumen is present, an opaque white band appears at the border between the two fluids. Within the last two days he was enabled absolutely to prove the presence of albumen in two specimens of urine in which the ordinary methods fail to detect it.

Dr. WILLARD said that in his case he had made use of this test.

Dr. PEPPER also exhibited the specimens from a case of *lymphadenoma* in which transfusion had been performed, and which will be published in a later number of the *Times*.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

APRIL 5, 1875.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

PRESENT, Messrs. Seiler, Neill, McQuillen, Mortimer, Norris, Kenderdine, Buckingham, Shaeffer, Thomas, Walmsley, Trueman, Reed, and Richardson.

The report of the committee to which was referred Dr. J. Cheston Morris's report on one-twenty-fifth and one-fiftieth objectives, recommending it for publication in the *Philadelphia Medical Times*, was read, accepted, and the committee discharged.

Dr. CARL SEILER read an interesting paper "On the Photographic Enlargements of Microscopic Objects" (see p. 563), illustrated by a large number of his beautiful photo-micrographs. He also exhibited a very complete adaptation to the microscope of the photographic camera, constructed by himself, in which the contrivances for manipulating the fine adjustment, and the stage-movements, were particularly remarkable for ingenuity and efficiency.

The communication was referred to a committee composed of Messrs. McQuillen, Corlies, and Shaeffer.

Mr. WILLIAM H. WALMSLEY displayed a fine Ross microscope, with Wenham's new adaptation of the Jackson model.

Mr. WALMSLEY also exhibited a resplendent slide of butterfly-scales arranged by Mr. Harold Dalton, of Havre, representing birds of brilliant plumage, around an iridescent vase; and one of Möller's new 100 diatom slides, upon which each frustule was arranged above its name in the appropriate compartment of a many-celled photograph prepared for its reception.

Captain MORTIMER, a corresponding member of the Section, displayed a slide of arranged diatoms showing a beautiful monogram of the San Francisco Microscopical Society, prepared for him by Mr. Coles, of Liverpool. Captain M. likewise described a very portable pocket-microscope, made by Browning, of London, at the low price of two guineas, which he proposed to bring before the Section at its next meeting.

Dr. J. H. MCQUILLEN remarked that he had had the pleasure of inspecting this ingenious pocket-microscope belonging to Captain Mortimer, and believed that similar instruments would prove very useful, not only to botanists, and, indeed, to naturalists generally, but especially to physicians, who frequently had occasion to investigate specimens of urine, sputum, blood, etc., at the bedside of patients, or under various circumstances where if an immediate examination were not made the operation could not be satisfactorily performed.

SELECTIONS.

AUDITORY VERTIGO.—The literature and current knowledge of this subject are succinctly presented by Dr. Labadie-Lagrave, in some recent articles in the *Gazette Hebdomadaire*. In a brief historical résumé it is shown that, although isolated cases had been reported long ago by Vieussens, and by Itard, Toynbee, and others, it was not until the laborious researches of Ménière that auditory vertigo was recognized as a distinct disease. Since then it has received full attention from numerous investigators, amongst whom may be mentioned Trousseau, who proposed the title *vertigo ab aure laesa*; Duplay, who named it Ménière's disease, a name subsequently adopted by Charcot, Hillairet, Politzer, Voltolini, Knapp, Hinton, and many others. The author

insists that, although the disease derives its name from Ménière, it is not to be forgotten that it is to the experiments of Flourens that we owe a rational explanation of the dependence of the symptoms on the labyrinthine lesion.

The onset is sudden. An individual in the midst of perfect health, and without appreciable cause, is seized with confusion, headache, tinnitus, and vertigo. His gait is uncertain and stumbling; when he rises, objects seem to turn round him; he staggers as if the ground sank beneath his feet. He cannot keep his balance without support, and he executes involuntary movements which impel him in a certain direction. At the same time his hearing is affected; sometimes he can only hear certain sounds. The noises in the ears are very pronounced. He seems to hear the sound of an orchestra, ringing of bells, the rushing of a cascade, or the whistle of a locomotive. Charcot dwells on the intimate relation which exists between the sudden development of noises in the ears, or the sudden exacerbation of these noises, and the onset of the vertigo. Though tinnitus is a common accompaniment of various kinds of vertigo, its intensity and predominance from the very first are characteristic of Ménière's disease.

The face is pale, the forehead bedewed with sweat, the skin cold. Then occur nausea and vomiting, which usually indicate the termination of the attack. The patient can obtain relief only by observing absolute rest in the horizontal position. There is no affection of speech, no spasm of face or extremities. Ménière once saw spasm of the face, followed by incomplete hemiplegia (on the same side as the affected ear), which disappeared in a few days. There is never tingling, numbness, nor any sensation analogous to an aura. These symptoms pass off after a variable time, and reappear sooner or later, each attack increasing the tinnitus and deafness, until the hearing is wholly lost.

The pathological conditions which give rise to auditory vertigo are sufficiently numerous, and some of them at least can be distinguished by the symptoms. In detail they are: 1. Vertigo from traumatic irritation; 2. Vertigo from galvanic excitation; where the electrodes are applied to the mastoid processes the head turns towards the positive pole; 3. Labyrinthine vertigo from internal otitis; of this the author distinguishes three kinds; 4. Vertigo from disease of the middle ear; 5. In rare instances vertigo occurs from obstruction of the auditory meatus; 6. Reflex vertigo; in some persons the access of a drop of water to the membrana tympani brings on a violent attack of giddiness.

Taking otitis labyrinthica as the lesion which gives rise to the most characteristic symptoms, the author proceeds to treat of these latter in two groups, according to the two divisions of the auditory nerve. The vertigo, the sense of rotation or the actual rotation, with their accompaniments, staggering, weakness, pallor, sweating, nausea, vomiting, and headache, are due to lesions of the semicircular canals. On the other hand, the tinnitus, and the gradual and finally complete loss of hearing, are owing to alterations of the cochlea.

To explain the deafness for certain sounds, the author adopts the hypothesis that a limited portion of the cochlea is injured in such cases; and that, as the injured fibres no longer vibrate in response to their corresponding sounds, no impression of these sounds reaches the nervous centre.—*London Medical Record*.

PARET ON THE THERAPEUTIC ACTION OF VALERIANATE OF CAFFEINE.—Dr. Paret, in his *Thèse de Paris*, 1874, No. 464, describes this substance as a product crystallized in white flakes, having a very disagreeable odor like decayed cheese. He has administered it in the form of ten centigramme pills, of which he gives from two to three. It may also be given as a syrup

containing ten centigrammes of valerianate of caffeine. Dr. Paret comes to the conclusions: 1. That valerianate of caffeine has, in some cases, appeared to put an end to the nervous vomitings co-existent with hysteria; 2. That this medicine had given to invalids increase of a decided appetite, and a physical as well as moral strength which they had not previously possessed; 3. That the vomitings of consumptive patients had not been checked by it. It has also been tried in the sickness of pregnancy, but without favorable results. It appears that Dr. Labadie-Lagrave has twice used the syrup of valerianate of caffeine for infantile whooping-cough, and that this medicine, taken in doses of two fluidrachms per diem, produced a very marked improvement. The fits of coughing, which at first amounted to fifteen daily, fell to four, after a week's treatment.—*London Medical Record*.

GLEANINGS FROM OUR EXCHANGES.

BRONCHOCELE (*New York Medical Journal*, May, 1875).—Dr. St. John, in an article on Goitre, alludes to the difficulty, and at the same time the necessity, of distinguishing between its different varieties, and mentions the following diagnostic points:

The *follicular* variety may be known by its soft feel, by its limited extent, being confined to lobes or lobules, and (if of long standing) by softening in spots to fluctuation, and therapeutically by its susceptibility to iodine. It affects more frequently the lateral lobes.

The *fibrous* form is *hard* and nodular, but has generally been softer at an earlier stage. The *vascular* form has a soft feel, often pulsates expansively, may have aneurismal thrill, while the varicose variety may show the enlarged veins. The cystic and colloid are the largest variety, the colloid resembling the follicular, but softer, more symmetrical, of slower development, and sometimes giving crepitation, while the cystic gives fluctuation. Exploratory puncture gives albuminous fluid, and it may be unilateral.

Exophthalmic goitre is generally of medium size and symmetrical (though sometimes more of the right lobe, as receiving more directly the impulse of the heart). An essential characteristic of it is alteration of size in connection with relations to pregnancy, menstruation, or mental conditions. It is essentially vascular in nature at first; after a time its structure may change, and the gland become harder, and may even atrophy. Pregnancy will sometimes suspend all the disagreeable symptoms. The general circulatory derangements and constitutional weaknesses make the diagnosis, as a rule, quite easy.

HYSTERICAL AURA.—Professor Charcot maintains, in an article in *L'Union Médicale*, that in most of the crises of hysteria there exists an aura having its point of departure in one of the ovaries, and sometimes in both. This having been determined, it suffices, in order to suspend almost instantaneously the attack, to exercise strong pressure upon the ovary which is the seat of the aura. In a recent conference that was held at the Salpêtrière, M. Charcot showed the efficacy of this procedure in the case of a patient afflicted with hysteropilepsy. In very many seizures he has suspended at will the attack by compressing the left ovary. The attack is resumed when pressure is removed. In order to exercise compression sufficiently long to avert entirely the attack, M. Charcot employed at the Salpêtrière a kind of tourniquet. Digital compression is made exactly as when one would compress the iliac artery. The fingers are pushed behind the pubes until the pulsation of the artery is felt beneath them.—*Boston Medical and Surgical Journal*.

ULCERATED SCIRRUS OF THE OESOPHAGUS (*New York Medical Journal*, May, 1875).—Dr. Merritt Bishop reports the case of a woman æt. 64, who had always enjoyed robust health, and who noticed suddenly some obstruction in the passage of food to her stomach. She had no pain; pulse and respiration normal. It was found to be utterly impossible to pass even the smallest bougie. The aliment consisted in the use of nutritive enemata. She survived for five days, suffering no pain, but having decided elevation of temperature. Autopsy revealed a perfect healthy condition of all the organs except the oesophagus. The malignant disease began at the cardiac orifice and extended up to the junction of the superior with the middle third, at which point a complete stricture was found, occasioned by adhesions. The surrounding tissues were very much hardened and thickened, pressing hard on the trachea, while the mucous lining was completely destroyed by ulceration.

MISCELLANY.

PARIS SCHOOL OF MEDICINE.—The new School of Medicine in Paris in its reconstruction gives opportunity for an enlargement rendered necessary by the constantly increasing number of the students who attend the courses of the school. To-day there are more than four thousand five hundred pupils. The plan as prepared by the architect, M. Ginain, divides the work into two sections. The first section consists of buildings designed for general studies, and for the administration. The new structures, being joined to the ancient buildings of the school, which were completed in 1786, permit of the preservation of the grand amphitheatre already existing, of the amphitheatres and laboratories of chemistry, of the halls for collections, of a vast library, of offices, and of the apartments for the dean. The second section, designed for the prosecution of practical studies, comprises the buildings of the hospital of clinics in the ancient convent of the Franciscans, and the apartments at present appropriated for pavilions for dissection. The principal divisions are a great amphitheatre for the courses of the faculty, various halls for free instruction, large physiological laboratories, a court for animals, aquariums, and apartments for practical anatomy (halls for dissection, laboratories of histology, of pathological chemistry, etc.); in addition, a museum of pathological anatomy within the ancient refectory of the Franciscans, and, finally, special laboratories for the professors, and various apartments. The entire expense of these works will be scarcely less than nine millions of francs.—*Boston Medical and Surgical Journal*.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF CALIFORNIA.—In regard to the medical department of the University of California, to which attention has been called of late in discussions on medical education, we learn that the school was formerly a private affair, one of the two medical schools in San Francisco; its head man was without high standing in the profession, but possessed of a big fortune and a great reputation in the country. His aim was to perpetuate his name, and he

therefore offered his school to the University with the buildings, etc., on condition that it should be called its medical department, naming the building "Toland Hall." The regents soon found that they had received an elephant. The old faculty insisted on becoming the new one, and in it were two professors, one of whom could not write two words correctly; the other, an American, always declared he had a French diploma until some began to doubt it, and he then showed a German diploma, which ultimately proved to be counterfeit. The *San Francisco News Letter* got scent of the scandal and brought it out in its true light, writing to the German university and finding out that no one of that name (Dean) had ever graduated there, and then publishing the letters in its issue. We regret to learn also that there are men in the State and city medical societies who have no diplomas, and yet are tolerated and admired.—*Boston Medical and Surgical Journal*.

FROM the annual report of the "Allgemeine Poliklinik," in Vienna, for 1874, we find that during that year 23,560 persons (3 per cent. of the entire population) sought medical advice from the institution. The number was greatest during July, in which month the daily number of patients averaged 353, on some days mounting up to 500. Diseases of the respiratory system were the most common, after which came, in the order of their frequency, affections of the circulatory, digestive, and nervous systems, and of the skin.

SIGNOR PERUZZI, the Syndic of Florence, has given orders that 800 out of the 1000 dogs annually found straying in that city, which have for some years past been placed at the disposal of Professor Schiff, shall be killed by the police. They are to be asphyxiated instantaneously in a cell constructed for the purpose and filled with carbonic acid gas, which is being prepared in the precincts of the public slaughter-house.—*London Medical Record*.

THE *Deutsche Klinik* has ceased to exist.

NOTES AND QUERIES.

NORTHERN MEDICAL ASSOCIATION OF PHILADELPHIA.

A STATED meeting of the Northern Medical Association of Philadelphia will be held at the hall of the Northern Dispensary, 608 Fairmount Avenue, on Friday evening, June 11, at 8 o'clock.

Subject for discussion: Meningitis. To be introduced by Dr. L. B. Hall. The medical profession are cordially invited.

CHARLES CARTER,
Secretary.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 25, 1875, TO MAY 31, 1875, INCLUSIVE.

SLOAN, WILLIAM J., SURGEON.—Announced as Medical Director of the Department. G. O. 29, Department of Dakota, May 4, 1875.

KNICKENBOKER, B., ASSISTANT-SURGEON.—The order directing him to proceed to Fort Colville, W. T., is revoked, and he is assigned to temporary duty at Fort Vancouver, W. T. S. O. 60, Department of the Columbia, May 11, 1875.

SATURDAY, JUNE 12, 1875.

ORIGINAL COMMUNICATIONS.

CASES OF PARALYSIS OF THE FIFTH CRANIAL NERVE.

BY FREDERICK P. HENRY, M.D.,

Assistant-Surgeon to the Eye and Ear Institute of Philadelphia; Physician to the Episcopal Hospital.

THE rarity of trifacial paralysis is shown by the following statistics: Among four thousand one hundred and sixty-nine cases of eye-disease treated at the Eye and Ear Institute of Philadelphia, from February 1, 1870, to February 1, 1875, were three cases of trifacial paralysis. In the Fifth Report of the New York Ophthalmic and Aural Institute, for the twenty months ending December 31, 1874, there is a record of five thousand five hundred and seventy cases of eye-disease, and among them but one case of trifacial paralysis, under the head of neuro-paralytic keratitis. In the report of Wills Ophthalmic Hospital for the year 1874, among three thousand eight hundred and nine cases of eye-disease I find no case of paralysis of the fifth cranial nerve. I have not included the ear-cases treated at two of the above-named institutions, although I might fairly do so, as in the five cases of trifacial paralysis (two occurring under my own observation, and the remainder in the practice of Prof. Noyes, of New York, and Prof. Norris, of Philadelphia) to which reference will be made in this paper the hearing on the paralyzed side was markedly impaired in all save one, in which the lesion was anterior to the Gasserian ganglion.

It is superfluous to prove, as might readily be done, that cases of trifacial paralysis are far more likely to present themselves at a dispensary for the treatment of eye- and ear-diseases than anywhere else: indeed, it is extremely probable that some of the cases are seen at more than one such institution, making their frequency apparently greater than it really is. The cases of trifacial paralysis which I have collected, although few in number, are extremely instructive, from the fact that they afford instances of lesion both behind and in front of the Gasserian ganglion.

The following case of *paralysis of the fifth and seventh cranial nerves, with impairment of muscular co-ordination*, seems to me of sufficient interest to warrant its being presented in detail to the readers of the *Medical Times*:

H. W., æt. 35, cabin steward, came to the Eye and Ear Institute on August 22, 1871, and gave the following history. Nineteen months before, he was attacked with right facial paralysis. The attack occurred during the night while he was on shore, the vessel on which he was employed being in port, and his attention was first called to it by one of his shipmates as he was going on board the next morning. It cannot be ascertained whether there was any impairment of sensation in the right half of the face at that time. Previous to the attack he had enjoyed good health, with the exception of occasional attacks of headache and vertigo.

About twenty years ago, he says, he had a bubo which suppurated and discharged, but there is no trace of a cicatrix in either groin. On each side of the neck, about four inches below the mastoid process, are two puckered cicatrices; the patient says the glands suppurated in 1858, and were lanced. The crests of the tibiae are slightly roughened. The man has three children, who are healthy, according to his account, and his wife has had one miscarriage, caused by fright. Eleven months ago (*i.e.*, before August 22, 1871) the right eye began to show signs of inflammation, and has continued in a state of subacute inflammation ever since. The cornea, in its lower half, is cloudy, and near its outer border is a small ulcer; there is neither pain nor photophobia, and the cornea and conjunctiva can be touched with the finger or probe without annoying the patient in the least. After the instillation of atropia, oblique illumination brings into view several posterior synechiæ. The lens-capsule is opaque, so that the retinal vessels, which are said to be enlarged in cases of paralysis of the fifth nerve, cannot be seen. In the right eye $V = \frac{2}{8}$; in the left eye $V = 1$.

The paralysis of the right trifacial is far from complete, but sensation is equally impaired in those regions to which its different branches are distributed.

The paralysis of the facial nerve is evident at a glance. The mouth is drawn to the left side; the uvula points to the left, and the velum is abnormally flaccid; the patient complains that it seems to "get across" his throat at times. He cannot close the right eye; the strongest effort approximates the lids to within a quarter of an inch of each other. The lids are not closely and evenly applied to the ball, as in health, and are very easily everted.

The sense of taste is decidedly impaired. I tested it by placing a small quantity of sulphate of quinia upon the right side of the tongue, and mixing it thoroughly with the saliva; the patient did not perceive it until, in the act of swallowing, it passed over the base of the tongue and impressed the nerve-filaments of the glosso-pharyngeal.

It is a question how much the loss of this special sense depends upon paralysis of the fifth, and how much upon that of the seventh, for, as is well known, in paralysis of the seventh of one side the sense of taste is impaired on the corresponding side. This is supposed to be owing to paralysis of the chorda tympani which accompanies the lingual branch of the fifth.

The sense of smell does not seem to be impaired, and the Schneiderian mucous membrane presents nothing abnormal so far as can be seen. The sense of hearing in the right ear is completely abolished. The membrana tympani is perforated, and there are signs of former inflammation of the middle ear. There is constant tinnitus. At present the patient is suffering from supra-orbital neuralgia.

What chiefly troubles him, however, is not the affection of the eye, nor the paralysis of the face, with its attendant deformity, nor the supra-orbital neuralgia, but a certain unsteadiness of gait during the day, which, after dark, amounts to staggering. This has been so great as to cause him to be suspected of drunkenness and dismissed by his employer. On closing his eyes and keeping his legs close together, he stands firmly, and can even walk a few steps with the eyes closed without staggering. He cannot walk steadily along a narrow passage without touching the wall with one of his hands, nor can he go up-stairs readily without touching the banisters. This, he declares, is not to support himself, but merely as a guide, and he says that if a cord were stretched above the stairs, he could ascend steadily by merely touching it with one finger. This was not put to the proof. In this case it would

appear that the deficiency in co-ordination is supplied by the special sense of touch, instead of by the sense of sight, as is most commonly observed. The impairment of the sense of sight may serve to account for this substitution.

The treatment consisted in faradization of the facial muscles, and the internal use of hydrarg. chlorid. corrosiv., gr. one-sixteenth, and potass. iodid., gr. x, thrice daily. The zygomatic and risorius muscles were the only ones that responded to the current, and those but feebly.

September 5.—The corneal ulcer has disappeared, and with a strong effort the lids can be approximated to within one line of each other.

September 13.—H. W. has obtained employment as cook in a restaurant, where his kitchen consists of a narrow passage about three feet by twelve, along which he moves without difficulty and without using his hands to guide himself.

My last notes of the case are dated October 27, at which time the staggering was so slight as to be of no inconvenience; the whole cornea was clear, and the man's general health greatly improved; the mouth was still twisted to the left side.

During a connection of four years with the Eye and Ear Institute I have seen but one other case similar to this. In it there was the same insensibility of the cornea and right side of the face, and a very unsteady gait. The right facial nerve was also paralyzed. There was, however, an undoubted history of syphilis. The attack came on after exposure to cold. The man was thrown out of a sleigh while on a drunken frolic, and lay in the snow the greater part of the night.

In a paper entitled "Paralysis of the Fifth Cerebral Nerve and its Effects," read before the New York Academy of Medicine (*N. Y. Med. Record*, July 15, 1871) by Prof. Henry D. Noyes, the history of two cases is given in detail. The first case occurred in a man *æt.* 33, without syphilitic taint. The fifth and seventh nerves of the right side were paralyzed, and the senses of taste, smell, and hearing much impaired. The membrana tympani was intact and transparent. There was at first occasional giddiness, which increased as the case progressed to a fatal termination. The cornea sloughed away entirely. A cancerous tumor had been removed from the lip before the patient came under the observation of Prof. Noyes; this ultimately recurred in the cicatrix, and destroyed the patient. There was no autopsy.

In Case II. the paralysis was limited to the two superior branches of the fifth, and the affection of the eye was very severe. Perforation of the cornea seemed imminent, and there was hypopion. Recovery took place under the use of electricity, atropia, and warm fomentations.

In the Transactions of the American Ophthalmological Society for 1871 is the report of a case by Prof. William F. Norris, of Philadelphia, in which there was neuro-paralytic ophthalmia of the left eye which proceeded to perforation of the cornea. There was slight paralysis of the left facial, and marked deafness of the same side, also impairment of the sense of taste. There was a large epithelioma at the left angle of the mouth. The case ran a rapid course to a fatal termination, its whole duration

occupying less than two months. At about the end of the first month dizziness and staggering occurred. There was no autopsy.

In the two cases which I have observed, the lesion was central, involving, probably, the deep origin of the fifth, the superficial origin of the seventh, and irritating or compressing the cerebellum. The affection of the eye was subacute, and, with the exception of the anæsthesia, may be, perhaps, fully accounted for by the paralysis of the orbicularis muscle. This is shown by the fact that, in the case which I have given in detail, the keratitis disappeared as this muscle regained its power, although the anæsthesia remained. In the two cases in which the lesion was probably a rapidly-growing tumor, as evidenced by their progressive nature and the appearance of epithelioma externally, the Gasserian ganglion was probably involved, and the eye-affection was very destructive. The most instructive case in this point of view is the one reported by Prof. Noyes, in which the lesion was *undoubtedly* in front of the Gasserian ganglion, as shown by the fact that the inferior branch of the nerve was unaffected, and here the eye-affection was very acute and threatening, and would have proceeded to complete destruction of the ball had not the cause of the disease been removed by treatment.

In concluding, I would call attention to the remarkable analogy between the effect of alcohol upon the nervous system and some of the symptoms presented by the above-mentioned cases. One of the earliest effects of alcohol is paralysis of the fifth pair, evidenced by numbness of the lips (Anstie, "Stimulants and Narcotics," p. 188), while it is needless to mention the unsteadiness of gait produced by that agent.

The fibres of origin of the fifth pair have been shown by anatomists to enter the cerebellum, "spreading out on the surface of its middle peduncle" (Gray's Anatomy), so that the observation of Anstie of the paralyzing action of alcohol upon the trifacial nerve lends weight to the theory that the species of locomotor ataxia produced by this drug is due to a toxæmia of the cerebellum. These considerations have induced me to attribute the disorders of muscular co-ordination which occur, so far as I know, invariably in connection with central paralysis of the fifth cranial nerve, to a lesion of the cerebellum.

INFLAMMATION AND ULCERATION OF THE APPENDIX OF THE CÆCUM, PRODUCED BY AN ORANGE-SEED, THE CAUSE OF FATAL PERITONITIS.

BY S. C. THORNTON, M.D.

ON Tuesday, June 30, 1874, I found E. C. B., 19 years of age, in bed, complaining of continued pain in the hypogastrium, which had already lasted two days.

Suspecting that he had colic, I gave him three grains of calomel and half a grain of morphia, and directed warm fomentations over the whole abdomen, and another half-grain of morphia to be exhibited in six hours if required.

The second dose of morphia was taken at 12 P.M. He rested well after it till 5 A.M., but after this the pains

became constant and more and more intense, so that at my second visit (July 1) they were unbearable. Another half-grain of morphia was given, with two large tablespoonfuls of castor oil. An hour afterwards he had an alvine passage. One-half grain of the morphia was directed to be given every four or six hours till he rested well.

Thursday, 9 A.M., I found him much worse. His pulse had been 108, but was now 140, and feeble. Skin cool, and covered with a profuse perspiration. Pain extended into the thorax. Abdomen hard and painful, but not much swollen. A terebinthinate stupe was applied over the whole abdomen, and morphia directed to be given as before.

3 P.M.—In addition to the other symptoms of yesterday, there was vomiting of bile.

11 P.M.—He was in a collapse. Directed the medicine to be discontinued.

Friday, 5 A.M., he died.

Drs. E. P. Townsend and A. W. Taylor, of Beverly, took part in the post-mortem.

The whole peritoneum—parietal and reflected—was found inflamed. In addition to the characteristic bright-red color, the apposed surfaces were firmly agglutinated by exudation. There was also in the abdomen a copious serous effusion, having a milky appearance from the large number of fibrinous flocculi in it. The peritoneum covering the convex surface of the liver was covered with coagulable lymph; that covering the stomach, mesentery, and bladder was free.

A careful examination of the appendix revealed an ulcerated opening, into which Dr. Townsend readily passed the handle of the scalpel.

In the right iliac fossa Dr. Taylor found a substance which he suspected had escaped from the gut. This, apparently, was a scybala of the size of a black-heart cherry. After washing it, Dr. Townsend and Dr. Taylor inclined to the opinion that it was a biliary calculus, but, on close examination, an orange-seed was found to be the nucleus of the mass. The appendix was only two and five-eighths inches in length, but augmented to three-fourths of an inch in thickness.

The calculus made its exit equidistant from the two extremities of the appendix. An adhesive inflammation must have followed the destroyer, for all communication between it and the cæcum was obliterated. And yet to the last it retained its fecal covering. The gall-bladder was distended, full of bile, but free from calculi.

REMARKS.—An interesting feature of this case was that during many months the patient had complained of much pain in his right hip, which was often increased by riding and sometimes relieved by walking. Was this pathognomonic of cæcitis, of inflammation of the appendix, or of both?

NOTES OF HOSPITAL PRACTICE.

CHARITY HOSPITAL, BLACKWELL'S ISLAND, NEW YORK.

CLINICAL SERVICE OF F. R. STURGIS, M.D.,

Lecturer on Venereal Diseases in the Medical Department of the University of the City of New York, etc., etc.

SYPHILITIC ECTHYMA.

GENTLEMEN,—I have three interesting cases to show you to-day of so-called syphilitic ecthyma. I shall exhibit the three together for the purpose of comparison, as they are really three different stages of the

same lesion. Before showing them, however, permit me to say a few words in regard to the nature of these lesions. In the books, you know, the pustular syphilides are divided into acne, impetigo, and ecthyma syphilitica. This is, to a certain extent, a bad nomenclature; and I would suggest, in place of it, that we adopt a name which describes the characteristics of the lesion and its cause. These lesions really begin as a pustule; and if we call them pustulo-crustaceous and pustulo-ulcerous, we describe not only the pathology of these lesions, but the cause as well.

To begin with the first case. She can assign no date for the time of the primary lesion; nor does she remember to have seen any evidence of syphilis previous to her present trouble. Nine weeks ago she noticed reddish spots appearing upon her back; these came out also on her hand; in a short time they became pustular, broke, and scabbed. For the last three weeks she has noticed that her hair came out while combing it. From the appearance of the eruption, the lesion is one which would generally be classed under the head of the tertiary rather than the secondary stage; though, as regards this point, the dividing line between these two stages is very vague and ill defined. An ecthyma may occur as an early as well as a late symptom. The correct division would be into superficial and deep,—those which appear in the early stage of the disease being superficial, the deep ones being the late lesions. You notice in this patient the different stages that the eruption goes through. Here the red discoloration of the skin becoming rapidly changed into a pustule, the pustule becomes ulcerated, and the ulcer is covered with a crust. If we remove one of these crusts, you will see that the ulcer beneath is superficial.

The rest of the lesion in this case is upon the back, the hand, and the scalp, although it is by no means confined to these localities. It may be present upon other portions of the body, but affecting chiefly the lower extremities and the back.

In the second case, on the other hand, you notice a different condition of things. The lesion is not so copious; the crust covering the ulcer is a great deal thicker, and you see that it is surrounded, in a more marked degree than in the first case, with a dusky-red border or areola, which extends for some distance beyond the crust. In stripping off this latter, you notice that it is quite tenacious; and upon exposing the ulcer beneath we find that, although superficial, it is deeper than it was in the preceding case. We have here an advanced stage of the same process, in which the first stage was a pustule; this became slightly ulcerated and covered with a soft crust; as the disease progressed, the ulcer became deeper, and the crust thicker and more adherent. We also notice that the suppuration is more abundant, and that bleeding occurs after detachment of the crust.

In this second case, the history is briefly that about four years ago she contracted a sore, followed by an enlargement of each groin, neither of which suppurred. One year following, she had a squamous eruption. Two years ago she had an ulcer on each leg; and about eight months ago, a pustular eruption, similar to the present one, came out upon her arms and legs. About March 1 she noticed reddish spots on her chin, which extended upward towards her lips. These were at first hard, but subsequently ulcerated, especially at the corners of the mouth. Three weeks ago a new eruption appeared upon her back. You notice in the history of the case that there has probably been a relapse. Earlier lesions are much more likely to relapse than the late ones, and when this occurs the symptoms often assume the same character as the preceding lesion. Let me call your attention to one point, to wit, the lapping of the sound skin over the edges of the crust. This

occurs from the ulcer extending beneath the skin farther than appears at first sight; in other words, the skin is undermined, and the secretion coagulating on exposure to the air, along the edges of the undermined skin, gives the crust the appearance of being embedded in the tissues beneath. If we examine the crust closely, we see that it is elevated above the surrounding skin, is convex, and thinner in the centre than at the edges, differing from a "rupial" crust, which is thicker at the apex than at the edges. This is due to the ulcer in the latter case being deeper and having more sharply-cut edges; whereas in "ecthyma" the ulcer is more superficial and the edges are on a higher plane than is the centre.

Let us look at the third case. Here, upon the breast, the crust is decidedly thicker and higher than in the other two; and on removing it you see that the ulcer beneath has begun to granulate. In these advanced cases the edges of the ulceration are undermined and steep, looking as though they were punched out; there is, therefore, a decided loss of tissue. The suppuration here is more abundant than in the other two cases, and the crust correspondingly thicker. As these ulcerations heal, granulations (as you see) spring up from the floor of the ulcer; the sides contract, and, after a time, cicatrization is perfect. The resulting scar is of a dead white color, resembling somewhat a burn, and depressed below the surrounding skin. You see here upon the shoulders such scars left from old by-gone ulcers.

Can we draw from these cases any idea as to the character of the primary lesion which preceded? Not always; but sometimes we can. In those cases where the subsequent symptoms take on ulcerative action, we may assume that there has also been ulceration of the primary lesion. This point was investigated by M. Bassereau, a French physician, and he found that where the chancre was phagedænic the subsequent lesions were apt to assume an ulcerated character, and *vice versa*. This arises, I am inclined to believe, from the patient's condition, which, bad from the beginning, induces ulceration, not only in the chancre, but in all the other lesions.

A word with regard to the date of the appearance of these lesions. In the books, you know, they are described as being those which occur at the late stage of the disease. Undoubtedly true; at the same time these symptoms may and do occur at an early stage of the syphilis, differing from the late lesions in that the ulceration is superficial as compared with the latter. I therefore think that the more correct division would be into superficial and deep, rather than the chronological one of secondary and tertiary.

As regards the diagnosis, the history will often be of more importance than the appearance of the lesions themselves. Paradoxical as it may seem, there is nothing absolutely pathognomonic in the appearance of the lesions of syphilis whereby on inspection you will be able to say of two given lesions, this one is syphilis and that one is not. Even the peculiar copper-color which is so often insisted upon in the books as peculiar to syphilis, you will find in eruptions which have nothing to do with the disease: so that one of the main points which has been borrowed from the old writers is really of less importance than was at first supposed. There is one point, however, which is of value; and that is the greater tendency which the syphilitic eruptions have to ulcerate and break down than the non-syphilitic ones; but even on this point you must not lay too much stress. The later lesions are not only an expression of disease being still present, but they are usually associated with a vitiated condition of the system. You notice the difference in the physical appearance of the three women. In the first case the woman looked ruddy and strong. In the second case the difference between

her and the first was marked: she looked pale and weak; while in the third the difference was still more marked: she had a wan, cachectic look. The difficulty is not so much in curing the lesions as in getting the patients up to their former condition. The disease is from the very commencement constitutional; is one that taxes the energies of the patient from beginning to end; *serious, from what it may result in, for, however superficial the primary lesion may be, you cannot tell absolutely whether tertiary lesions will not supervene.* It is very necessary, therefore, to treat your patient well from the start; to prevent, if possible, the appearance of late lesions.

In respect to the treatment, it is twofold,—specific and tonic. By specific treatment is meant treatment with mercury and iodide of potassium. Of late years there have been quite warm discussions as to the relative value of these two remedies, some contending that mercury, if not actually injurious, is at least inferior to the iodide. This I believe to be a mistake; and the profession at large are coming to regard mercury as the safer and surer agent in the treatment of syphilis. You must not, however, limit yourself to any special mode of treatment, but adopt that which appears most fitted to the case in hand.

Let us study the treatment of these late lesions. It is in these cases that the iodide of potassium has been especially extolled, and not without reason; it is undoubtedly of benefit. But you will often find that after the iodide of potassium has been given for some time the symptoms will not improve beyond a certain point, but will remain stationary. If, now, mercury be added to the treatment, the patient gets well. I have therefore come to regard the iodide of potassium in these cases as the adjunct, and not as the main agent in the treatment. There are two methods of giving mercury,—externally and internally. Of these two, much may be said for the external method. One reason why it has not been so much used in this country, particularly in private practice, is that patients object to the soiling of their linen; but that may be obviated by using the same underclothes while the treatment is going on. It has the advantage of leaving the stomach entirely free, and the less that is disturbed with medicine the better. In these cases you must remember to build your patient up; reserve the stomach for food, and the skin for the specific treatment. It is surprising to see how the mercury will be absorbed, if the inunction is properly administered. Remember that in these lesions you have a serious condition of things. Ulceration, sometimes deep, is present; this, perhaps, extends; the disease progresses; important organs are threatened; the bones and viscera are attacked, and when this happens it very often becomes a nearly hopeless affair. Suppose the alimentary canal is attacked; of course your patient will not assimilate his food; tonics are of little use, and, push your treatment as far as you please, your patient will not recover; he falls into a condition of marasmus, and perhaps dies. Fortunately, however, few cases go so far as this. A great deal of the bad name that mercury has received is due to its improper use; and many practitioners, uncertain of its action and fearful of doing harm, give it in a very hesitating and doubtful manner. If you are going to give it in that way you had better not give it at all; much better depend upon the iodide of potassium. If you give mercury, give it in full doses, and, where occasion requires, freely. It is surprising to see how much mercury your patient will tolerate. Rub in half a drachm of the ointment to begin with, and increase it up to one or two drachms, if the patient will stand the dose. You will then find that the lesion will go away, where a smaller quantity would have no effect. Although I advise you to be bold in your treatment, I do not intend you to be

rash. Watch your patient; observe the effect of the treatment; see if the lesions disappear; and should any untoward symptoms, such as salivation, stomatitis, or diarrhœa, supervene, suspend the use of the mercury at once. There are various other methods for its external use,—viz., by baths, fumigation, and hypodermic injection. They present no special advantages over inunction, and many disadvantages; so that, although useful in some cases, they do not need more than a passing notice here.

Internal treatment is principally with the bichloride of mercury, the protiodide of mercury, and blue mass, with or without tonics; and of these the former is the one most frequently used. Many who use it speak well of it. Personally, I am sorry to say, I cannot do so. In my hands I have found it is liable to produce the toxic effects speedily, and is not capable of being pushed to any great extent. One of my favorite ways of giving mercury by the mouth is to use the blue pill (*massa hydrargyri*) in connection with quinine or iron. The formula I use is two grains of the mercurial to one grain of the tonic, in pill form; one, two, or three to be given three times daily, p. r. n. In this way of giving it the mineral is rapidly absorbed, and very seldom disturbs either the mouth or the bowels. This I give more especially in the early stages of the disease. I wish to direct your attention for a moment to the use of the quinine and iron. From the commencement, in the early as well as in the late stages, the red blood-corpuscles are notably altered in number and quality. From the very beginning, syphilis is a blood-disease, so that a tonic, in addition to the specific treatment, becomes an essential. Do not, because you know the value of mercury and iodine in the treatment of syphilis, underrate the advantage to be derived from the use of tonics. You must always bear in mind that the patient is to be sustained in general health and strength, as well as cured of his syphilis.

Another preparation of frequent use is the protiodide of mercury, given alone, or combined with conium or opium. The usual dose is from one-half grain to one grain, daily, either in a single or divided dose. It is usually given in conjunction with the iodide of potassium, under the name of the mixed treatment. With regard to the iodide of potassium, the same rule is to be followed as in the administration of mercury,—*give it freely*. The great mistake that nine practitioners in ten make, is to give a dose of iodide of potassium in from three to five grains. This is too little; the patient will stand the iodide well; his disease very often imperatively requires it. Begin, therefore, with ten grains, and from that run it up until your patient cannot stand any more, or until the symptoms yield. The moment that occurs, stop the remedy. It sounds like an enormous dose, but in this hospital I have run patients up to over five hundred grains a day, with the effect of relieving their symptoms, when with less no result was obtained. Thus, you see, this remedy can be pushed to a great extent; and if, in the deep lesions of the bones and other organs, you give only a small dose of ten or twenty grains, the disease, so to speak, laughs at it. Give a dose of forty grains or more, and the symptoms vanish. Be cautious, then, with whatever drug you use; do not give it rashly, but do not hesitate to employ it freely.

With regard to tonic treatment, you must remember that in these late cases there is very decidedly-marked cachexia, and that it must be your duty to overcome, so far as possible. Build up your patient, then, with good food, stimulants, and tonics. The mercury will second the action of the tonic,—indeed, will itself act as a tonic.

TRANSLATIONS.

DIAGNOSIS AND TREATMENT OF NEURALGIAS.—Pitha (*Allgem. Wien. Med. Zeitung*, No. 1, 1875, et seq.), who has himself been a victim of various neuralgic symptoms following purulent infection, gives some curious experiences relative to his various subjective symptoms.

Neuralgia of the base of the bladder gave the impression of a calculus; the sharp projections could be felt against the mucous membrane, and on movement the stone was perceived to strike against the pubic symphysis. Examination by means of a sound showed the absence of any calculus, and the characteristic symptoms disappeared gradually from this time.

Neuralgia of the heel gave the impression of a subperiosteal separation of bone; instruments scraping and operating in this locality were also felt, though no bone-trouble was present.

The various forms of neuralgia from which Pitha suffered seemed central in their origin, and defied all therapeutics.

He has therefore had recourse to injections of morphia, which method of using the drug seems the most desirable. He suggests that the remedy should at first be used in the smallest doses; these not to be given in rapid succession, and only gradually to be increased, since the narcotic effect is cumulative.

Certain individuals, particularly those suffering from cardiac weakness, have such an idiosyncrasy against morphia that even the smallest doses are sufficient to bring on the most marked toxic symptoms,—deathly pallor, cold sweats, intermission of the pulse and respiration, protracted nausea, and vomiting. Chloroform and chloral hydrate seem to act similarly on such persons; the author therefore urges the greatest caution in giving the first dose, and also as regards avoidance of veins.

In case of poisoning, he counsels fresh air, affusion with vinegar and cold water, enemata of strong coffee, and, if necessary, artificial respiration. If the symptoms persist, Pitha suggests the trial of chloroform inhalations. Against the disagreeable effects of morphia on the intestinal canal, Pitha suggests the use of muriate of quinia in coffee, and occasionally one one-hundredth grain injection of sulph. atropia. By long use of morphia these symptoms disappear, as does also the persistent but not disagreeable sleeplessness. He has never observed any evil psychical effect from these injections. The injection should not be made near the affected part. Pitha has devised an instrument for painless injections in which the fine needle-point is suddenly thrust under the skin by a spring. Patients should never be trusted with hypodermic syringes.—*Centralblatt*, No. 18, 1875. X.

CONGENITAL LUXATION OF THE KNEE.—Dr. Du-brisay reports the following case (*Le Mouvement Médical*, May 8). A healthy young woman fell into labor at full term, the infant presenting by the head, and the delivery being accomplished without difficulty. After cutting the cord the child was examined, and it was found that the right femoro-tibial articulation presented a vice of conformation. The right leg, by a double movement of forced extension and internal rotation, had been twisted forward in front of the thigh and abdominal walls, the extremity of the right foot being in contact with the right flank. The limb was restored without difficulty by simple extension and flexion; the movement of flexion was easy and normal when made either by the volition of the child or artificially, but when the limb was left to itself, if the child restored it by extension it did not remain in a straight line, and the displacement was reproduced, the leg forming a right angle with the thigh. None of these movements

seemed to give the least pain. A gutta-percha apparatus was applied so as to keep the leg partially flexed, and this was re-arranged morning and evening. At the end of five weeks a complete and permanent cure was attained. X.

HEMORRHAGIC PLEURISY.—At a recent meeting of the Société de Biologie (*Le Mouvement Médical*, May 15), M. Prévost communicated the notes on the following case of pleurisy which he had observed in his clinic. A man was admitted to the ward in December, apparently intoxicated; the liver was much enlarged. Some days afterwards the right side became painful, and there was dyspnoea. Finally, all the symptoms of pleuritic effusion were noted, and thoracentesis was practised. The liquid obtained consisted in great part of nearly pure blood.

A second puncture made some days later gave exit to three litres of the same liquid. Soon after, the patient was attacked by fits of coughing, accompanied by albuminous expectoration, pointing to oedema of the lung.

The patient finally succumbed. Post-mortem examination showed large quantities of false membranes, and on a level with the first puncture a tumor was observed, which proved to be a sarcoma. This sarcoma had been developed under the influence of the traumatism produced by the various punctures. X.

ERGOT IN THE TREATMENT OF INCREASED MAMMARY SECRETION AND INFLAMMATION OF THE BREAST (J. Schtscherbinenkoff: *Centralblatt für Chirurgie*, No. 19, 1875).—During an epidemic of raphania in the Russian department of Simbirsk, Dr. S. made the interesting observation that a diminution, or even an entire cessation, of the secretion of milk in nursing women was not of rare occurrence when symptoms of ergotism appeared.

He observed a similar phenomenon among cows fed with meal containing ergot, or allowed access to straw in the ears of which grains remained which had undergone similar changes. Since an accumulation of milk in the glandular parts of the breast is regarded as the chief cause of mastitis, he administered ergot in many cases in which this process was in an early stage.

In two cases of multiparæ, who at each confinement had suffered with mastitis, going on to suppuration, secale cornutum was administered as soon as any enlargement of the gland, due to an accumulation of milk, was noticed; and its administration was followed by the happiest results. Secale cornutum, in conjunction with quinine (ãã gr. v, t. d.), was also used in cases of so-called milk-fever. The same treatment which was used successfully in mammary trouble during the puerperal state was attended with equally good results in tumefaction of the gland, with febrile reaction, in women at a later period of lactation. Secale cornutum was also given at the time of weaning the children, in cases in which a speedy cessation of the secretion was desired. In such cases it was given up to the amount of one drachm for a week, with no unpleasant results. W. A.

PUNCTURE OF THE BLADDER.—Deneffe and Van Wetter, in a recently published work ("De la Ponction de la Vessie"), have endeavored to ascertain whether this operation is one which should only be resorted to as a last expedient, or whether it is sufficiently safe to allow of its frequent practice. Out of 328 cases examined with this end in view, 44, or 13 per cent., were found to have terminated fatally. Most of these patients, however, died from other causes; so that the operation itself could not be said to have ended fatally in more than 7 cases, or 2 per cent. of the number. The puncture was performed as follows: through the perineum (17 cured, 3 died), through the rectum (86 cured, 11 died), through the symphysis (1 case, cured), below the symphysis (1 case, cured), through the hypogastrium

(125 cured, 27 died), and, finally, by aspiration (54 cured, 3 died).

The operations of forced catheterism, external urethrotomy, and, indeed, the attempt at catheterism, are condemned as much more dangerous than puncture. Puncture through the rectum the authors regard as a very undesirable operation, and accompanied by subsequent inconveniences if the canula has to be retained.

The authors regard puncture of the bladder as more than a merely palliative measure, asserting that it has a direct influence in cases of stricture, so that a large catheter may frequently be introduced after the bladder has been emptied by the puncture. In inflammatory or traumatic strictures, the influence of puncture on the condition of the urethra is still more marked.

In difficult cases, where restitution of the normal canal can only be attained by external urethrotomy, retro-urethral catheterism through the fistula, by Verguin's method, may be employed, in order to fix the locality of the posterior section of the wounded urethra. Nine cases are cited by the authors in which this procedure was adopted successfully. Experience has shown that the peritoneum can always be avoided if puncture is made at a point not more than one and two-thirds inches above the symphysis pubis.

Capillary puncture is only recommended when there is a prospect of the urethra soon regaining its permeability. They cite two cases in which capillary puncture was performed more than twenty times in the same individual without any disagreeable result.—*Centralblatt für Chirurgie*, No. 35, 1874. X.

CASE OF MÉNIÈRE'S DISEASE.—M. Raymond stated at a recent meeting of the Société de Biologie (*Le Mouvement Médical*, May 15) that there was at that time under the care of M. Charcot a woman presenting all the symptoms found in the affection known as Ménière's disease. The least movement made in the ward caused the patient to become attacked by nausea and vomiting. She experienced at the same time singing in the ears, and vertigo. M. Charcot had ordered this patient sulphate of quinine to the extent of fifteen grains daily, and under the influence of this medication the symptoms had diminished. The constant ringing in the ear, which was almost insupportable, and which she compared to the noise of a railroad-train, had diminished in intensity, and had been replaced by a less severe ringing sensation, similar to that brought on by the use of quinine. X.

UMBILICAL TUMOR COMPOSED OF THREE HERNIÆ.—M. Lucas Championnière recently communicated the following observations to the Société de Chirurgie:

A patient upon admittance to the hospital presented all the symptoms of intestinal strangulation. The umbilical region was the seat of an enormous tumor. Death followed soon after the operation, which was performed *in extremis*. The existence of three herniæ was subsequently ascertained; one of these was situated at the umbilical ring, and the two others, constituted by an enormous mass of omentum and a portion of the small intestine, were found under the linea alba. X.

THE SO-CALLED THIRD DENTITION.—Jos. Scheff (*Wien. Med. Presse*, 1874, No. 47) notes eighteen cases in which the so-called third dentition was dependent upon the retention of one or more milk-teeth in the jaw. Some years later, eruption of these abnormally-retained teeth took place. The permanent teeth, which had remained in the jaw meanwhile, then first made their appearance. If the fact that the earlier set were milk-teeth had been overlooked, it would be easy to regard this last eruption as a third dentition. That this latter was the case Scheff denies.—*Centralblatt*, March 13. X.

PHILADELPHIA
MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

THE MEDICAL PROFESSION AT THE ANTIPODES.

ACCORDING to the *Melbourne Medical Record*, to be a doctor in that part of the world, where man walks with his head downwards, the laughing jackass is a bird, cherries have their stones on the outside, beasts have bills, and leaves are set with their edges to the sky, is to do otherwise than sleep upon a bed of roses, to be clothed with a majestic dignity, or to be the recipient of a steady flow of wealth. Including the whole population in Victoria, the doctors are about one in a thousand; and of the possible clients, nearly one-fourth depend upon hospitals and dispensaries for medical advice and treatment, and as many more belong to clubs. As the "highest medical authority of Victoria"—even the august Vice-Chancellor of the Melbourne University—"will finger a club-patient's pulse for sixpence," the outlook for new-comers is not very enticing. Yet European practitioners are notified in the advertising columns of the journal that if they wish to settle in Australia the editor will give them all "the information they may require." We should think the editorial column was a sufficient light-house.

Advertising and puffing in the newspapers appears to be with the profession in Victoria a favorite means of occupying leisure moments, and it is very clearly intimated that custom sanctions "forty per cent. from the druggists and a percentage from the undertakers." A medical profession, like wine,

requires age to ripen, and in a new country must always be composed of a mongrel set, bound together only by the loosest of ties. In 1975, we doubt not, wealth and dignity will be as closely associated with the practice of physic in Melbourne as they now are in London.

VIVISECTION IN THE ENGLISH PARLIAMENT.

TWO bills for the regulation of vivisection are now before the English Parliament. One, Lord Hartismere's bill, prohibits vivisection except in a registered place, which is to be open at any time to the visits of an inspector of anatomy. Vivisections are to be performed only on animals completely under the influence of anæsthetics, and curare is expressly excluded from being deemed an anæsthetic. The performance of a vivisection without anæsthetics requires that a special license be procured at a cost of £10, such license being terminable at the end of six months. Power is given to a justice of the peace to issue search-warrants and to prosecute, and severe penalties are attached.

The other bill is, we believe, fathered by Dr. Lyon Playfair. By it any person—for the purpose of new scientific discovery—is permitted to make an experiment on a live animal, provided the animal be rendered insensible, and be killed on the termination of the experiment, if it have been much injured. Licensed persons may subject an animal to an experiment without the use of anæsthetics, provided that the experiment be solely for the purpose of new scientific discovery, and that insensibility would frustrate the object of the experiment. A register of all such experiments is to be kept. A license may be obtained on application by any person, if accompanied by a certain certificate intended to guard against abuse; but in the case of professors of physiology, medicine, anatomy, or surgery, the certificate is dispensed with. Various penalties are attached, and the mode of their collection prescribed.

THE Legislature of Connecticut, some two years ago, appropriated five thousand dollars, and the city of Hartford a like sum, for the purpose of erecting a monument to the memory of Horace Wells, the discoverer of anæsthesia. Under the direction of a committee, a colossal statue in bronze of Dr. Wells has been executed by Truman H. Bartlett, Esq., and will soon be ready for erection on some commanding site in the beautiful park in the city of Hartford, where the discoverer lived.

It is upon the pedestal, which should be also of bronze, and its ornamentation, that any further funds ought to be expended. This will admit of high and costly adornment, in bas-reliefs, in inscriptions, etc., suited to exemplify the uses of the discovery, at the same time that it commemorates the discoverer. In order to obtain these funds, an appeal has been made especially to physicians and dentists for subscriptions. It appears to us that as it is the people who receive the great benefit of Dr. Wells's discovery, they should furnish the means to do him honor. We trust, however, that the Philadelphia profession will not be backward in the matter.

Letters of inquiry may be addressed to Dr. E. K. Hunt, Chairman of the Committee of the Hartford Medical Society. Subscriptions may be forwarded to Dr. G. W. Russell, Treasurer, Hartford, Conn.

THE celebrated natural philosopher, Pasteur, retires from his position as Professor in l'École de Médecine, owing to age. The Academy of Medicine has declared him "national laureate," and the national assembly voted him an annuity of nearly \$2500, to which should be added his retiring annuity of about half that sum; so that, loaded with honors and furnished with pecuniary means, he can enjoy his old age. In America, distinguished scientists in old age are turned out like old horses, to pick up what they can. Is it a wonder trade and commerce swallow up so much of the brain of the country, and that even men of the strongest scientific instincts are swept into a "practical life"?

At a meeting of the Board of Regents of Michigan University, it was resolved to create a homœopathic medical college, and to appoint two professors, who shall be designated respectively Professor of *Materia Medica* and Therapeutics, and Professor of the Theory and Practice of Medicine. For the other branches the students are to depend upon the lectures in the old medical department.

FRANK BUCKLAND, the naturalist, reasons thus: sleeplessness is often due to too much blood in the brain; eat a hard-boiled egg, draw off blood to the stomach, and go to sleep.

THE Jefferson Medical College has bought, we understand, ground back of their present edifice upon which to erect a hospital that shall communicate directly with the college building.

THE University Hospital receives \$10,000 by will of the late Mr. Towne.

LEADING ARTICLES.

SALICYLIC ACID.

NO. II.

A LEADING article published in the *Medical Times*, March 13, contains a short account of the discovery by Kolbe of a cheap method of manufacturing salicylic acid, together with a description of its chemical and physiological properties, and an allusion to some of its possible therapeutic uses.

Since it was written, a number of investigators have taken up the subject, and various communications have been published, particularly in the German journals, giving the results of experiment upon the internal and external use of the remedy in various cases. It is our intention in this article to give a brief account of the results attained, with the hope of stimulating further and more active research on this side of the water.

Experiments upon the internal and hypodermic use of salicylic acid have been made by Dr. Paul Fürbinger.* In the normal condition no lowering of temperature was observed after its administration.

Experiments in septic fever were then made, the fever being excited in animals by giving them quantities of contused spleen infused in stale urine. Salicylic acid was then administered in doses varying from .05 to 0.2 gramme, larger doses being found to produce toxic effects. Irritative fever was also produced by the inunction of croton oil, and purulent fever by means of a saline mixture containing laudable pus injected into the connective tissue.

In all these experiments the acid, when administered, was found to have marked antipyretic powers, the temperature falling very perceptibly in a period of time varying from two to six hours subsequent to its administration. In one case where toxic effects had been produced in a rabbit from an over-dose, the symptoms were those of collapse, and the post-mortem examination showed the cause of death to have been diffuse peritonitis, brought on by extensive corrosion of the lower bowel.

Dr. E. Butt† has employed salicylic acid in various cases of typhoid fever, erysipelas, and acute articular rheumatism with very good results; but the number of patients under his observation has been too small to allow great weight to be attached to his results. He believes salicylic acid to exercise a marked antipyretic effect, and is even inclined to place it on a level with quinine in this respect. No disagreeable effects have been noticed by him in any case.

Stephanides‡ has employed salicylic acid in dysentery and chronic diarrhœa. His experiments extend to only a few cases, in which, however, striking results were obtained. He administered the acid either pure "on the point of a knife" (a method, according to Kolbe,

* Centralblatt f. Med. Wissen., No. 18, 1875.

† Ibid.

‡ Wien. Med. Presse, No. 14, 1875.

not without risk), with tinct. opii, or in some cases by enema to the extent of a gramme at one time.

In a series of papers on the subject of the various organic disinfectants, Drs. Vajda and Heymann* discuss, among others, the action of salicylic acid. Its disinfectant effect they say might have been anticipated from its chemical relation to carbolic acid, but its superiority to this agent in many respects is surprising.

While the continued use of carbolic acid brings on such local symptoms of reaction as burning sensations, rise of temperature, and redness, none of these symptoms were produced by the use of salicylic acid under precisely similar circumstances. Even in a case where the cavity of a large abscess had been repeatedly washed out with a two-and-a-half per cent. solution of salicylic acid, much of the fluid necessarily remaining in the cavity, no disagreeable effects were produced. Neither have any of those general unpleasant symptoms been noticed, such as headache, feverishness, and the like, which are observed after long-continued use of carbolic acid. In dressing large superficial wounds with salicylic acid no unpleasant general effects have been observed, although the fact of its absorption is shown by a green coloration of the urine. In markedly infecting wounds salicylic acid is useless, while carbolic acid and its congener cresylic acid neutralize their effect. This is probably due to the cauterizing influence of these latter agents, since when they are used in a diluted condition they likewise are found to fail.

The most complete contribution to our knowledge of the uses of salicylic acid in surgery has been made by Thiersch.† He finds that granulating wounds upon which a solution of one part to three hundred has been sprinkled show no signs of inflammatory reaction; if after the acid has remained in contact with the granulations for some time these become covered with a white film of precipitated albumen, the healing process still goes on as usual underneath. Sprinkled upon gangrenous or other foul surfaces in substance, salicylic acid deprives them of odor, and by occasional renewal the deodorization may be maintained indefinitely. When, however, there is a thick body of putrefying tissue, the acid cannot of course penetrate deeply enough to insure the absence of all smell.

Thiersch is an enthusiastic advocate of Lister's method of dressing wounds, and his accurate and thorough manner of carrying out the plans of the latter are well known. He has, of course, used salicylic acid by Lister's method, and is disposed to give it decidedly the preference over carbolic acid. For one purpose, however, it cannot be used, that is, for disinfecting surgical instruments, since it oxidizes steel with great rapidity.

Thiersch has devised a salicylic wadding for hermetically sealing wounds treated by the antiseptic method; it is composed as follows: Two ounces of salicylic acid are dissolved in two pints of alcohol of specific gravity .83, and this solution is diluted with twenty pints of

water at a temperature of 158° to 178° F. Six pounds and eight ounces of "cotton batting," after having been first deprived entirely of oily matter, are saturated with this solution.

When dried, this wadding contains about three per cent. of salicylic acid, which is sufficient for most cases. Thiersch employs, however, another wadding containing ten per cent. of the acid, and which he distinguishes from the first by tinting it slightly by means of cochineal. When handled dry, this wadding should irritate the hands slightly; if it does not do this, it does not contain a sufficiency of acid.

The cotton wadding thus used by Thiersch has one disadvantage, it is slightly less permeable than it should be, and therefore, in cases where the discharges are abundant, these are apt to form collections under the dressing instead of soaking into it. To avoid this, Thiersch uses jute impregnated with salicylic acid in profusely suppurating wounds. This, though coarser than cotton, is much more permeable.

Thiersch's experience extends to one hundred and sixty of all kinds of surgical cases, treated in the Leipsic clinic during the past year. He finds that under the use of the salicylic acid, cases of pyæmia were much diminished. Erysipelas, on the contrary, did not appear to be affected. In thirteen cases, one fatal occurred.

This circumstance suggests a curious dilemma commented upon by Thiersch. If Lister's method excludes the atmospheric ferment, then erysipelas cannot be due to this cause. If, on the other hand, erysipelas is due to this cause, then Lister's method is powerless to prevent the access of germs to the wound.

Thiersch inclines to the former view, and regards the bacteria found in erysipelas, even under Lister's dressing, as of accidental occurrence.

A discussion, however brief, on the subject of the relation of vegetable organisms to disease, would lead us far out of the range of a short article like this, whose object is entirely practical. We will, therefore, avoid this, and in conclusion state a few of the advantages and disadvantages claimed for salicylic acid.

1. It is antiseptic.
2. It is odorless. This is a double advantage, for not only does it make the application of the remedy much more agreeable, but the limit of its effect can easily be measured when it is used in foul-smelling discharges, and the amount to be employed may be regulated accordingly.
3. It is non-irritating when applied to the skin, to wounds, or to granulating surfaces.
4. It is not poisonous when absorbed into the circulation.

On the other hand, salicylic acid must be admitted to have certain inconveniences. Like carbolic acid, it roughens the hands if they are much exposed to the vapor, as in Lister's method of dressing; and it also excites coughing and sneezing when inhaled, until toleration is induced. Doubtless other inconveniences may appear when further investigation is made, as it is usual

* Wiener Med. Presse, Nos. 6-19, 1875.

† Volkmann's Sammlung Klinische Vorträge, Nos. 84 and 85, 1875.

for a new remedy of this sort to put its best foot foremost; but enough has been done to induce a full and thorough trial in hospitals and by physicians generally. In this city, Dr. Washington Atlee has recently used a strong solution of salicylic acid for the purpose of washing out the abdominal cavity after the operation of ovariectomy. No signs whatever of any local irritation were observed, but the patient succumbed a few days after the operation from an immediate suppression of urine. As the post-mortem examination is said to have revealed renal disease of some standing, it is impossible to say whether or not the salicylic acid could have had any injurious effect in this instance.

Dr. A. Hewson has cured a case of favus, without cutting the hair, by two applications of a saturated solution of the drug. We believe also that our surgeons are using it with satisfaction. X.

CORRESPONDENCE.

THE NEW JERSEY STATE MEDICAL SOCIETY.

ATLANTIC CITY, May 26, 1875.

MR. EDITOR,—Our city by the sea recently had a regular spring tide of doctors, and, thinking it would perhaps keep bright for a season your fireside, I have gathered up some drift-wood. We do not enjoy the inestimable advantage of a county medical society, and consequently the Camden Society made all the arrangements and did the honors of the occasion. With the aid of the Camden and Atlantic Railroad president, they whirled us from your city through the delightful scenery of Jersey,—concerning parts of which your correspondent could well believe what tradition states, *i.e.*, that the crows weep for pity as they fly over it. If every tear-drop crystallized into a grain of sand, crows must have been abundant. At Congress Hall we found the tables loaded with Jersey wine,—a present from one of the neighboring vineyards. Talk not of Heidelberg, when Atlantic City is at your doors. Rather thin, and smacking of the vinegar-cask, however.

In the evening the serious business commenced. At the appointed hour the 109th meeting of the New Jersey State Medical Society was called to order by Dr. Larison, of Hunterdon County, the President of the Society. Eighty-seven delegates, representing eighteen counties, responded to their names at roll-call. There were also delegates present from the New York, Pennsylvania, Massachusetts, and Rhode Island medical societies.

Dr. John W. Snowdon, of Camden County, chairman of the committee, welcomed the Society to Atlantic City in an interesting address, in which he detailed some of the peculiarities and hygienic advantages of that seaboard section of the State, in which he has practised upwards of thirty years.

Dr. George H. Larison, the President, then read his address. He spoke of the progress of New Jersey during the past century, and alluded to the approaching

centennial celebration of the nation. He then traced the development of the science of medicine from the time of Moses down to the present day, and closed with a very fine peroration, referring to the duties of physicians, both as individuals and as associations.

Dr. Wickes, from the Standing Committee, reported that the records of the Society were complete for one hundred years past, and a committee was appointed to revise and publish them.

At this point occurred what is unusual of late years, but what was very customary in the earlier history of the Society: two candidates applied to the Society for examination for the title of M.D., which, according to the laws of New Jersey, enables them, if they successfully pass it, to practise in that State without a college diploma. Drs. Kipp, of Newark, Foreman of Hudson, and Newell, of Hunterdon, were appointed a committee to examine them. If this examination, which these two gentlemen successfully passed, was as thorough (and we do not doubt that it was) as in the old days, when the law compelled every doctor who wished to practise in New Jersey, whether a graduate of a medical college or not, to pass an examination before the State Society, they may be proud of their success; for I have a vivid recollection of hearing some of the Nestors of the profession in that State recount how they had passed through both an examination at college and at the hands of the Society's Committee, and that the latter was much the more trying ordeal. I could not help thinking what a change would take place if that old law could be re-enacted,—how the State would be cleared of quacks and charlatans, and what—tell it not in Gath—a consternation would prevail in the very ranks of the Society.

The Nominating Committee was then appointed, consisting of one delegate from each county represented in the Society, who sit after the adjournment of the evening meeting, and select the officers for the succeeding year, and also name the place at which the next meeting will be held.

In the evening the Camden County Medical Society gave a banquet to the assembled doctors, followed by the usual round of speeches. Your correspondent was clearly established in his belief that doctors are men of deeds, not words, but was mightily shaken by the witty speech of Dr. Hunt, and well pleased by that of Mr. Lucas, a railroad director, who proved conclusively that to enable a baby to digest his nursing-bottle, india-rubber teat and all, it was only necessary to bring him to Atlantic City.

After the opening of the regular meeting of Wednesday morning came the report of the Standing Committee, read by the chairman. This is the most interesting report made to the Society, and is a feature peculiar to this Association; and, I believe, has no parallel in any other medical organization in the country.

The Standing Committee of the New Jersey Medical Society is composed of three members, two of whom are elected annually, but the chairman is a perma-

nent officer. This position is now, and has been for many years, filled by Dr. Stephen Wickes, of Essex, certainly one of the ablest men in the Society. It is the duty of this committee to obtain reports from all parts of the State,—reports from district medical societies of the meteorological and sanitary condition of their sections, the diseases prevailing during each year, their treatment, reports of specially interesting and unusual cases,—in fact, a report of everything that can interest the profession; and all communications upon these subjects must first pass into their hands before they can be presented to the Society. Annually it is their duty to compile from the documents received from all these various sources a general report, to be read at the yearly meeting of the Society, which gives as it were a panoramic view of the medical history of the State during the previous year.

The local reports themselves are not read unless deemed by the committee exceptionally interesting. They are, however, published with the transactions of the Society, and distributed to every member of it. No discussion of this report has heretofore been allowed, but during the morning, on motion of Dr. E. M. Hunt, it was adopted that at future meetings a discussion of half an hour should be permitted, limiting each speaker to five minutes' time. By the above plan the duration of the annual meetings has been accurately limited to one evening and one day, and yet all the affairs of the Association are thoroughly attended to.

From the report of this year, read by Dr. Wickes, we learn that the health of the people of New Jersey has been unusually good during the past year; but few local epidemics were reported, and among them was one of births from Cape May County. Last summer and autumn were exceptional healthy seasons; cholera morbus, cholera infantum, dysentery, and diarrhoea being milder and less frequent than usual. The valleys of the Delaware, Raritan, and Passaic Rivers, where malarial diseases are common, enjoyed unusual exemption from them. The severe cold weather of the winter and early spring caused an increase of sickness, and pneumonia, scarlet fever, diphtheria, and other throat and thoracic affections prevailed throughout most of the State. Diphtheria occurred endemically over many districts, and was frequently fatal. One reporter remarks that in his district it was chiefly confined to low and unwholesome localities, but reports two instances in which it occurred in places enjoying the best hygienic advantages, where, upon investigation, he found unnoticed sources of poison from organic matter. Another reporter narrates a very singular circumstance. During the last summer, three children were sent from one of the cities in East Jersey to a farm in the country to preserve their health, which was good. They were given milk to drink from one fine, healthy cow. One day the cow escaped from her pasture-field into an adjoining one, containing the same kind of pasturage, and also a pond of stagnant water from which she drank. The next day one of the children was taken suddenly sick, and died; and, within a few

days, the other two were also taken sick, and died. The cow remained perfectly healthy.

Dr. William Pepper, of Philadelphia, being favorably reported from committee by Dr. Bodine, of Trenton, was unanimously elected an honorary member of the Society.

Dr. Elmer, of Trenton, Corresponding Secretary, made a report of his correspondence with other societies, etc., during the year. He also reported that at the last session of the Legislature a bill was introduced into the House by the homœopaths, appointing a Board for the Granting of Licenses, to be composed of four regular physicians and three homœopaths. This was defeated in the Senate by the vigilance of the Trenton doctors. The bill for the organization of a Board for the Regulation of the Sanitary Condition of the State had been defeated. This subject afterwards gave rise to a considerable debate, as the policy of the State Society has been for many years to have as little legislation in their behalf as possible, deeming it the wisest course to ask only for what was indispensable to them, and to prevent quackery from getting anything. The whole subject was finally referred to a committee.

After various reports, essays, and resolutions had been read or acted upon, Dr. Pumyea, of the Nominating Committee, reported the following officers for the ensuing year: President, Dr. William O. Gorman, Newark; First Vice-President, Dr. John V. Schenck, Camden; Second Vice-President, Dr. H. R. Baldwin, Middlesex; Third Vice-President, Dr. John S. Cook, Warren; Recording Secretary, Dr. William Pierson, Jr., Orange; Corresponding Secretary, Dr. William Elmer, Trenton; Treasurer, Dr. W. W. L. Phillips, Trenton; Standing Committee, Drs. S. Wickes, S. Thornton, and Thomas Ryerson. These officers were unanimously elected.

Cape May was adopted as the place of meeting in 1876. SAND CLAM.

NEW YORK, May 24, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

THE "Baldwin Pavilion" of the Woman's Hospital is now almost completed, but it cannot be opened for some time, unless some of the friends of the institution will endow it still more liberally.

It seems that Mr. John C. Baldwin gave a hundred thousand dollars for this building, on condition that it should be erected within a certain specified time. The income of the hospital now, however, will not permit of the increased expenditure necessary for the maintenance of this addition, and the new portion will, therefore, probably have to remain unoccupied for the present. This is the more to be regretted, as the number of applicants for admission to the low-priced and charity wards is constantly much greater than can possibly be accommodated. The Baldwin pavilion is of precisely the same appearance and construction as the older building, and when it is opened the capacity of the hospital will be just doubled. Since the resignation of Marion Sims, early in the winter, no new chief-sur-

geon to the institution has been appointed, the number of patients being equally divided among Emmet, Peaslee, and Thomas. The first has his operations on Tuesdays, the second on Wednesdays, and the third on Saturdays; and only physicians with special invitations are admitted to these.

On Wednesday last Dr. Peaslee had an ovariectomy which presented several points of interest. He was to have performed it the week previous, but the condition of the patient did not permit. There were evidences of suppuration of the cyst which indicated a very unfavorable effect upon her system. The tumor was of the right ovary, and consisted of one large cyst and one small one, the latter situated at its lower portion, near the pedicle. An enormous quantity of semi-purulent fluid (probably five or six quarts) was drawn off, which was exceedingly fetid, and some of which was very thick and grumous. Yet the patient had been tapped only about ten days before, and twenty-five pounds of fluid obtained then. The latter did not contain such a large proportion of pus. The adhesions were very extensive and firm, and great care had to be exercised in their detachment; especially as some of them reached even to the liver. The omentum, instead of being spread over the anterior surface of the tumor, as is usually the case, was found rolled up above it. The peritoneum covering the intestines was completely engorged with blood, thus showing how imminent was the danger of extensive inflammation. The pedicle was of moderate length. It was secured by silk ligatures and then dropped into the abdomen. A small cyst, of the size of a bean, having been discovered in the left ovary, it was evacuated, and several small vessels were now ligated, as some little hemorrhage had been occasioned by the breaking up of the adhesions. A tube was inserted into the lower end of the abdominal incision, which reached behind the uterus into the cavity of the pelvis, for the purpose of washing it out, if necessary, with antiseptic fluids. This was first packed with dry cotton cloth, and then the latter moistened with a saturated solution of salicylic acid, so as to render it air-tight. Dr. Peaslee thinks an open tube is simply an invitation to septicæmia, and if it be true that this is occasioned by the entrance of bacteria into the abdominal cavity, it is effectually prevented by thus plugging up the tube. The edges of the wound were secured by eighteen or nineteen silver-wire sutures, about half an inch apart, as Peaslee prefers to have a large number in case excessive tympanitis should ensue. Over the whole a compress saturated with the salicylic acid solution was placed, and then the abdomen was covered with strips of adhesive plaster five or six inches in width, passed completely round the body. The operation lasted over an hour, being rendered somewhat tedious by the care necessary in detaching the numerous adhesions and by the time consumed in controlling the resulting hemorrhage. The prognosis was not very favorable, and the patient died about thirty hours afterwards. Dr. Peaslee also expected to operate on a case in private practice the

same week. From the physical signs elicited he supposed the tumor to be a monocyst, and accordingly tapped it, when he found it was in reality a polycyst. He is of the opinion that polycysts should never be tapped, unless one is prepared to go on with the operation of ovariectomy within twenty-four or forty-eight hours afterwards, as fatal effects may sometimes follow if this is not done.

The excitement in regard to affairs at the Presbyterian Hospital is still unabated, and we understand that several gentlemen have been approached by the authorities with the idea of finding out whether they would accept positions on the visiting-staff in the event of other possible "resignations" taking place. The action of the board of managers before spoken of has resulted in calling forth a protest, which has just been made public, signed by Drs. Markoe, Hamilton, Sands, Metcalf, Thomas, Van Buren, Wood, Flint, Emmet, Barker, Jacobi, Thomson, Draper, Loomis, Peaslee, and other leading medical men, without respect to college or clique. After expressing the regret with which they have learned of the summary dismissal of four of the visiting-physicians, who, so far as is known, were fully competent for the positions which they held, and discharged their duties with diligence and skill, they go on to say,—

"We believe that you have failed to realize the full character of your action. In thus discharging these gentlemen, you in effect proclaim your opinion that they are unfit for the positions which they held. By so doing you incur the responsibility of seriously injuring their reputation; and you have taken this grave step without preferring any charges, or assigning any reason for so doing. We believe you will admit that while you have acquired certain rights in assuming the position of manager of a hospital, you have also incurred certain obligations. While it is your right to appoint and dismiss the medical staff, it is also your duty to exercise this right for the best interests of the hospital. It is evidently your duty to obtain for the patients under your charge the best medical and surgical skill which our profession affords. We can hardly believe that any physician or surgeon of reputation will serve in any institution from which he is liable to be discharged without just grounds. We believe, therefore, that both as members of the medical profession and as citizens we are justified in asking that you shall make public the reasons for your late action."

During the past week the report of the Commissioners of Charities and Correction for the first three months of the year was presented to the mayor. From this we learn that the expenditures of the quarter, which, of course, came out of the pockets of the tax-payers of New York, amounted to \$368,818. This sum was divided among the items, salaries, supplies, out-door poor, and repairs to buildings and apparatus. About six hundred tons of coal were consumed in the institutions, and about four hundred distributed to the out-door poor. The number of inmates remaining in some of the institutions March 31 was as follows: Bellevue

Hospital, 732; Charity Hospital, 807; Fever Hospital, 4; Epileptic and Paralytic Hospital, 116; Hospital for Incurables, 117; Convalescent Hospital, 239; Nursery, Randall's Island, children, 481, adults, 110; Nursery Hospital, Randall's Island, children, 184, adults, 49; Infants' Hospital, Randall's Island, children, 277, adults, 192; Lunatic Asylum, Blackwell's Island, 1183; Lunatic Asylum, Ward's Island, 676; Idiot Asylum, Randall's Island, children, 170, adults, 150. The number remaining in the Penitentiary, Almshouse, Workhouse, City Prison, and other departments, brought the total population of the institutions up to 9718; of whom 6509 are males, and 3209 females. Number of applications for relief by the sick during the quarter, 3210; of these, 136 were rejected, 1309 were sent to Bellevue, 1451 to Charity, and 292 to various other hospitals. The Commissioners state that the Charity Hospital and other retreats on Blackwell's Island have received their careful attention, and that the supplies, therefore, have been plentiful and of good quality. Charity Hospital had 747 inmates January 1, and received 2324 during the quarter; 202 died, and 2062 were discharged. Its capacity is 2000 beds. The Smallpox Hospital is now under the direction of the Board of Health. Only 13 persons were in the Inebriate Asylum on Ward's Island, and the Commissioners think it a failure. During the quarter the Out-door Relief Department furnished money or coal, or both, to 16,806 families, comprising 61,079 persons.

The ancient and honorable the Society of the Cincinnati held their Triennial Convention a short time since in New York; when delegates from all of the seven States in which its members reside were present, and Hon. Hamilton Fish was for the seventh time elected President. The Committee of Arrangements consisted of Gen. John Cochran, Alexander Hamilton, Jr., and John W. Groaton; Gen. Cochran, its chairman, being a lineal descendant of Dr. John Cochran, Surgeon-General and Director-General of the hospitals of the Army of the Revolution.

The Central Dispensary, one of the newer and less richly-endowed institutions of the kind in the city, has made a very lucky hit in securing for a benefit at the Academy of Music the services of George Rignold, the most recent theatrical lion in New York. As this occasion will be his farewell to America, the receipts will, no doubt, be exceptionally large, for more than one fair creature in the best society has had her head turned by this Adonis of an actor. The tone of his letter accepting the proposition is admirable, and seems to show that he really desires the benefit to be as successful pecuniarily as possible. In it he says, "My present engagement terminates on the 5th of June, and I wish to sail for England as soon as possible after that date; but a few days may well be devoted to such a purpose in a city where I have met with so much kindness and generous hospitality. I am ready to place myself at your disposal. If you will allow me to suggest, you will announce it as my last appearance in New York, and I will play for you my original charac-

ter of *Amos Clark*, in the 'Bar Sinister,' in the study of which I had the assistance of its accomplished author, the late lamented Watts Phillips. This piece has never been acted in New York, so far as I can learn, and it met with great success abroad, and was the means of making me more popular than any other character I have sustained. I trust it will prove a substantial benefit to the charity."

The following changes and appointments at the colleges are announced: Medical Department University of New York,—Dr. Alfred C. Post resigned from the chair of Surgery, and elected Emeritus Professor of Clinical Surgery. Dr. John T. Darby, formerly of South Carolina, and late Professor of Surgical Anatomy in the University, appointed to Dr. Post's place. College of Physicians and Surgeons,—Dr. Alonzo Clark elected President of the College, in place of the late Dr. Edward Delafield. Dr. Thomas F. Cock, Trustee, to fill the vacancy left by the death of Dr. Delafield. Dr. Francis Delafield, Adjunct Professor of Pathology and Practical Medicine. Dr. John G. Curtis, Adjunct Professor of Physiology and Microscopic Anatomy.

PERTINAX.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

WEDNESDAY, APRIL 7, 1875.

DR. WILLIAM S. FORBES read the history of a case of *acute tetanus*, beginning on the fourth day after an extensive burn, and advancing with great rapidity,—having, in forty hours from its commencement, a temperature of 102°, a pulse of 133, and a respiration of 32 per minute,—presenting marked opisthotonos, with trismus and a horrid tetanic grin; and having the muscles of deglutition considerably involved, together with paroxysms of brief and painful spasms which yet were perfectly controlled by inhalations of nitrite of amyl, which was given in doses of five drops twice a day for forty-six days.

S. H., aged 17, a brickmaker, was admitted to the male surgical ward of the Episcopal Hospital on the afternoon of the 5th of February, with burns of his body and extremities from hot iron, which had been accidentally blown against him from a foundry. He had walked to the hospital, a distance of a mile and a half, the air at the time being very cold. He was burned severely from his waist to his heels; the greater portion of the burn being of the second and third orders of Dupuytren. He was at once put to bed, his wounds dressed with linseed oil and lime-water, his whole person enveloped with cotton, and half a grain of sulphate of morphia administered and repeated five hours later. The following evening he had a chill, and complained of pain in his extremities and along the spine. Morphia was given, the oil-dressing was removed, and replaced by the ceratum resinæ acidum. The following two days he felt quite comfortable; took food and a little morphia, which was the last that he received.

On the 9th he had no desire for food; complained of soreness, and had a severe convulsion in the evening.

On the morning of the 10th, he had stiffness of the jaws, with pain in the back of his neck, and his mouth began to assume a tetanic grin. He was given milk

and beef-tea, and five ounces of brandy during the twenty-four hours.

On the morning of the 11th there was marked opisthotonos with trismus, accompanied with great difficulty of swallowing, which began the evening before. His skin was hot, temperature 102° F.; his pulse 133, and his breathing 32 per minute. A teacupful of beef-tea was ordered every two hours, alternately with milk; to be taken day and night, and eight ounces of brandy in the twenty-four hours. He had a convulsion during the night.

In view of the excellent effects obtained by the use of nitrite of amyl in epilepsy, angina pectoris, etc., it was determined to try the virtues of the same drug on the contraction of the muscles in this case of tetanus, and to try it alone, and without the intervention or administration of any other medicinal agent whatsoever, that its efficacy might be properly tested, and that it should stand or fall as the issue of the event, in this case at least, might determine. Nitrite of amyl had been used previously in three cases of acute tetanus, but in only three cases, and each case terminated successfully, but other and well-known agents were at the same time administered. This case is the first in which amyl has been used alone, and successfully, and its action recorded. The amyl was first administered on the evening of the sixth day after the accident, and about forty hours after tetanus first discovered itself. Before the three drops had half evaporated, the heart's action became more quiet; and at each inhalation of the amyl afterwards it was generally observed to have a quieting effect on the heart's action. Towards the latter part of the treatment the pulse was among the eighties, although on giving the patient five drops on the 4th of April, six days after he had ceased to inhale five drops twice daily, the heart's action was 132 and tumultuous. The eyes were suffused, the skin of the face and neck became very much congested; indeed, the whole surface of the body was more or less congested; but this soon passed away when the amyl was withdrawn. The three drops had scarcely begun to cause congestion when there was evinced a tendency to gape, and a few days afterwards gaping and yawning both took place at each inhalation until the administration of the drug was discontinued.

This gaping and yawning was produced in each subsequent administration of the drug, which was given twice daily. A marked improvement was at once manifested in all his symptoms.

On the 14th, having another spasm, the dose was increased to five drops twice daily.

The amyl in the hospital giving out on the morning of the 18th, it was not replaced until the evening of the 20th. During this time he grew rapidly worse; the opisthotonos and the risus sardonius both returned, and his pulse and temperature rose rapidly. On recommencing the inhalation of amyl he felt better almost immediately, and from that time progressed steadily to complete recovery.

On the 29th of March, forty-six days after the first dose of the amyl was given, the patient appeared to be perfectly well. He could walk about, and eat and drink, and enjoy himself in every way as before the attack, except having a feeling of weakness. The amyl was now discontinued; he had inhaled one ounce.

In reviewing the results of the observations of pathologists in cases of tetanus, Dr. Forbes stated, we find that they all point to disintegration of tissue as an established fact. We also find through the researches of physiological chemistry that the capability which muscle has of exercising its functions depends for its strength upon the presence or absence of certain matters formed in this muscle itself by the *decomposition* of the muscular tissue. Lactic acid and kreatine are the products

of decomposition of muscular substance; they are to the muscle exhausting matters; they act in an opposite manner on the peripheral nervous system; they elevate the excitability of the muscular nerves; *they are muscular stimulants*. And we find that muscular contraction depends on the forces of the muscular substances set free and rendered available by increased metamorphosis of matter, and that the chemical bodies mentioned, lactic acid and kreatine, produce no definitive alteration of the muscle by their presence, but that their effects may be destroyed by their removal. The simple removal of the exhausting stimulating matters, *lactic acid* and *kreatine*, from the muscle, restores the normal vital properties of the muscle.

What, then, are we to learn from these observations and this case of tetanus? We learn that tetanus is the result of an augmented disintegration of muscular tissue; that the products of this disintegration, lactic acid and kreatine, further excite the nervous peripheries until by reflex action there is established a "violent and painful contraction of the voluntary muscles," which is long continued and "heretofore uncontrollable;" that in traumatic tetanus the augmented disintegration of muscular tissue is caused by an increased excitation of the nerve-peripheries exposed; that in idiopathic tetanus there is a self-generated power akin to the poison of rabies and to strychnia, exciting the nerve-peripheries, which, by reflex action, causes the augmented disintegration of muscular tissue, and the products of disintegration, lactic acid and kreatine, which further excite the nerve-peripheries until there is established the condition known as tetanus.

Impressed with this as the pathology of tetanus, the appropriate treatment should be the use of those agents which are known to prevent the disintegration of tissue, which will lessen the irritated nerve-peripheries, which will sustain nutrition and advance the elimination of the morbid products.

The *modus operandi* of the nitrite appears to be by arresting the process of oxidation in the tissues, and the same reasons which lead to its use in tetanus—namely, to prevent the disintegration of tissue, and to lessen the irritated nerve-peripheries while nature is eliminating the morbid products—should also cause it to be employed in hydrophobia.*

SELECTIONS.

TRANSFUSION.—The question as to the practicability of using the blood of an animal belonging to a different species has lately been to some extent determined by Landois (*Centralblatt*, 1874, No. 27) and Ponick (*Virchow's Archiv*, vol. 62), who have shown that the moment the amount of such blood exceeds a small and fixed quantity, unfavorable symptoms will under all circumstances develop themselves. Ponick discovered the presence of free hæmoglobin in the blood-plasma in these cases, and, as a natural consequence, in the various organs and their secretions. He draws attention to the anomalous presence of this substance, which is never found in normal blood, in the blood-plasma, and, considering that the function of the kidneys is to get rid of such a substance, he concludes that the deleterious effects of such transfusions are caused by the inability of these organs to perform the extra work thus imposed upon them. That the kidneys are hereby seriously inflamed is proved by finding after death a copious exudation of plasma into the lumina of the

* Since this paper went to press, the last number of *New Remedies* has been received, containing a note of a case of tetanus successfully treated by inhalations of nitrite of amyl, reported by Funkel, of Berlin.

uriniferous tubules, which at once causes an insufficient amount of urine to be secreted. Death takes place just as it does in cases of uræmia, from suppression of urine, the symptoms being in both cases similar. The success which Dr. Hasse, who always transfuses lamb's blood, professes to have obtained is not above question, and the results obtained by other operators, as, for instance, Birsch-Hirschfeld and Ries, have not come up to the expectations which a perusal of Dr. Hasse's publications is calculated to awaken. In three cases in which I have lately been called upon to perform the operation, I used defibrinated human blood. The ordinary operation was performed twice for excessive anæmia (pseudo-leukæmia), and once in a case of poisoning with carbonic oxide. In one of the cases of anæmia and in the case of poisoning with carbonic oxide, the operation was quickly followed by the patient's recovery. The other case of anæmia, which occurred in a young man aged 27, proved fatal five hours after the operation, with all the symptoms which usually accompany death after the transfusion of animal blood. None of the patients complained during the operation either of violent stitch or pain in the back, which is a constant symptom when animal blood is used. In all three the temperature rose during the two hours following the operation to 104° and 104.9° F., and then sank quickly to normal. There were no further symptoms. The blood transfused was on each occasion obtained from patients who were suffering from some slight bronchial affection. Immediately after the operation, the patient, who, as above mentioned, afterwards died, felt quite well, and, like the other two, his pulse was stronger and fuller than it had been previously, and his breathing, which had been somewhat hurried before the operation, became quieter. During the third hour after the operation he began to complain of want of breath, and became very restless, tossing himself about in bed, and died quite suddenly without presenting any very special symptoms.

The urine that was found in the bladder was the color of blood, and contained some cylinder-shaped bodies, which were composed of a finely granular, yellowish-red mass, which contained, however, no red blood-corpuscles, but on which the usual hæmoglobin markings were plainly visible.

At the post-mortem, the heart was found slightly hypertrophied and fatty. The spleen was slightly enlarged; there was extravasation of blood beneath the serous membranes, especially the pericardium and pleura. Neither macroscopically nor microscopically could any alteration be detected in the vessels. The kidneys were large and unusually pale. Under the microscope the epithelium of the straight tubes appeared dull. Here and there at the junction of the straight and convoluted tubes broad cylindrical bodies were found which corresponded exactly with those in the urine. All this agrees accurately with the post-mortem appearances described by Ponfick and Landois as occurring in cases that proved fatal after the transfusion of animal blood. I have not quite made up my mind as to what were the conditions in this case that led to the fatal termination. It seems, indeed, probable that there was, if I may be allowed to use the expression, a sort of morbid predisposition of the whole circulating system and its contents. From the state of fatty degeneration in which the heart was found, it is plain that there must have been some interference with the nutrition of the vessels, and a considerable change in the constitution of the blood. Now, why should not blood whose chemical and morphological elements have undergone such a change bear the same contrast with healthy blood, as it has been found by experiment that lamb's blood does with dog's blood?

It will be very hard to determine in successful cases

what influence the transfusion has had, or if, indeed, it has had any. But the operation itself is so simple, and its good effect so notorious, that it certainly deserves to be performed oftener than it is. In the case of leukæmia that I transfused successfully, the operation had a marked influence on the constitution of the blood. For a drop of blood obtained before the operation by pricking the finger appeared of a light blood-red color and watery; while a drop obtained in a similar manner after the operation had a florid red color, and seemed thicker. Both before and after the operation the red blood-corpuscles presented a peculiar pale and glistening appearance, and their number was not perceptibly increased by the operation. I may further remark that the eight cases in the Augusta Hospital, in which Dr. Kuster lately performed transfusion with lamb's blood, all turned out unsuccessful. These eight cases all died, and in none of them was the good effect of the operation perceptible for more than from ten to fourteen days. In one case the operation was probably the immediate cause of an attack of hæmoptysis, and in another it was followed by protracted fever. All the patients complained during the operation of violent pain in the back, and great difficulty in breathing. From half an hour to an hour after the operation they were seized with a rigor, followed by a rise in temperature, which was again dissipated in from five to six hours. It is only fair to mention that all these patients were suffering at the time of the operation from some severe surgical injury.—*Dr. C. A. Ewald, Charité, Berlin; from Irish Hospital Gazette.*

GLEANINGS FROM OUR EXCHANGES.

LUXATION OF TESTICLE.—Dr. Hess reports a case of luxation of the right testicle. An artilleryman, thirty-one years of age, was knocked over by the rebound of a cannon, and was found lying upon his face unconscious, his sabre between his legs. On his return to consciousness a small tumor was discovered in the upper part of the thigh, and was supposed to be caused by an effusion of blood. Two days later, on a more careful examination, the right testicle was discovered underneath the skin on the inside of the thigh, at a level with the lower border of the scrotum. It could be moved upwards, but was very painful. The right side of the scrotum was empty. At the end of a few days the reduction of the displaced organ was effected. The author thinks that the testicle was displaced by being pushed back to the inguinal canal, and in consequence of the resistance offered by the sabre could not return to its place, but was pushed under the skin of the thigh.

TESTING FOR CHLOROFORM.—E. Rennard describes, in *Pharm. Zeitschrift für Russland*, an interesting case of detecting chloroform in a body which had been dead seven days. About sixty grammes of the liver and intestines, with one hundred and twenty grammes of blood from the same, were distilled, and ten cubic centimetres of a perfectly clear distillate obtained. From three to five cubic centimetres of this liquid were mixed with two cubic centimetres of an alcoholic solution of potash and one drop of aniline, or some salt of aniline, and the test-tube gently warmed by dipping it in hot water. The disgusting and penetrating odor of isonitril was at once observed. This test, which was devised by Prof. A. W. Hoffman, will detect the presence of one six-thousandth part of chloroform, and may be employed where all the usual tests fail.

To bleach sponge, wash first in weak muriatic acid, then in cold water; soak in weak sulphuric acid, wash in water again, and finally rinse in rose-water.

MISCELLANY.

THE MEDICAL NIGHT-SERVICE OF ST. PETERSBURG.—The *Voix* gives some details of the practical working of this new institution, already referred to in these columns, and which has now been in operation for a twelvemonth. At first, this new night-service, founded by the private exertions of a few medical men, had many difficulties with which to contend; but perseverance triumphed in the end, as it usually does. This novel institution is now found to be extremely useful to the inhabitants of St. Petersburg, and reckons persons of all ranks and means among its clients. The medical men on duty are always ready to render the services asked at their hands, without any previous knowledge that their labor will prove remunerative; neither do they shrink from going, when required, to the most dangerous and notorious localities. The number of visits made and carefully registered during the current year amounts to 1024, of which the greatest number was in January, when they amounted to 152; the maximum of visits made in one night being six, and the minimum three. The patients comprised 524 men, 363 women, and 137 children of both sexes. These nocturnal duties were performed by fifteen of the permanent staff and thirty-five occasional helpers. The fees paid by persons in good circumstances have been utilized in completing the necessary arrangements for this night medical service and in organizing small surgeries, where the necessary appliances may be always found at hand. The example thus set by the medical profession at St. Petersburg has been followed by the sincerest of flattery, "imitation," at Moscow, Odessa, Warsaw, and other large cities of the north.—*London Medical Record*.

CRIME AND AUTOMATISM.—Dr. Despine, in his *Psychologie Naturelle*, gives a striking analysis of the mental status of the criminal classes. Attracted by the singular want of emotion displayed by most criminals, Dr. Despine was led to a thorough examination of court records and other sources of information. He arrives at a belief in the entire absence of moral sense in this class. He says that free-will, which in the normal man is only controlled by the sense of duty, in the criminal has no such counter-balance, this sense being wanting. His acts are, therefore, mentally automatic, the result of the strongest instinct, appetite, or passion prevailing at the time. Most criminals are, therefore, morally irresponsible, no matter how great the crime as against society. Like brutes, savages, and idiots, they yield to natural appetites and passions, unrestrained and unreproached by any feeling of impropriety, although intellectually cognizant of the moral standards of society. Hence their remarkable *sang-froid*, and the superficial character of any apparent reformation or conversion. Dr. Thomson, resident surgeon to the General Prison for Scotland, at Perth, finds his experience confirmatory of the views of Despine, and, in a paper published in the *Journal of Mental Science* for October, 1870, recognizes various degrees of "moral insensibility."

A MATCH UNDER THE MICROSCOPE.—Those who are fond of investigations with the microscope will find a beautiful object in the head of an ordinary parlor-match. Strike the match, and blow it out as soon as the head has fused sufficiently to cause protuberances to form on it; on that part of the head which took fire first will be found a white, spongy formation, which under the microscope and with a bright sunlight on it, has the appearance of diamonds, crystals, snow, frost, ice, silver, and jet, no two matches giving the same combination or arrangement.—*Scientific American*.

THE Prince of Bavaria, whose sister married the Crown-Prince Rudolph of Austria, has, it is stated, adopted medicine as his profession. By all accounts he will be a very successful practitioner, for he has not only received a diploma, but he has within the last few days performed a most difficult operation at the Munich Ophthalmic Hospital.—*Boston Medical and Surgical Journal*.

WE desire to call attention to the Medical Charts of the Case Record Company, as a means of facilitating accurate note-keeping; the prices are, five cents each, fifty cents per dozen, three dollars per hundred.

ON the 3d of March the first stone of the Anatomical School of the new Faculty of Geneva was laid with great pomp.

THE Cross of Commander of the Norwegian Order of St. Olaf has been conferred on Professor Sigmund, of Vienna.

DR. G. L. CARIUS, professor of chemistry at Marburg, died on April 26, in the forty-sixth year of his age.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 1, 1875, TO JUNE 7, 1875, INCLUSIVE.

- RANDOLPH, JOHN F., SURGEON.—Relieved from duty at Camp Robinson, and assigned to duty at Fort D. A. Russell, Wyoming Territory. S. O. 64, Department of the Platte, May 29, 1875.
- FRANTZ, J. H., SURGEON.—Assigned to duty as Post-Surgeon at Fort Preble, Maine. S. O. 105, Military Division of the Atlantic, May 26, 1875.
- WEEDS, J. F., SURGEON.—Assigned to duty at Nashville, Tennessee, as Post-Surgeon. S. O. 71, Department of the South, June 2, 1875.
- LORING, L. Y., ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 38, Department of Arizona, May 18, 1875.
- HARVEY, PHIL. F., ASSISTANT-SURGEON.—When relieved by Surgeon Frantz, assigned to duty at Fort Independence, Massachusetts. S. O. 105, c. s., Military Division of the Atlantic.
- HOFF, JOHN V. R., ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 64, c. s., Department of the Platte.
- ADAIR, G. W., ASSISTANT-SURGEON.—Relieved from duty at Ringgold Barracks, and to proceed to Fort Duncan, Texas, reporting upon arrival to Lieutenant-Colonel Shafter, for duty in the field. S. O. 106, Department of Texas, May 31, 1875.
- SKINNER, J. O., ASSISTANT-SURGEON.—Relieved from duty in Department of the Columbia, and to report in person to the Commanding General, Department of the South, for assignment to duty. S. O. 111, A. G. O., June 4, 1875.
- HAMILTON, JOHN B., ASSISTANT-SURGEON.—Assigned to duty at Fort Colville, Washington Territory. S. O. 64, Department of the Columbia, May 19, 1875.

SATURDAY, JUNE 19, 1875.

ORIGINAL COMMUNICATIONS.

TUBERCULAR ULCERATION OF THE LARYNX AND TRACHEA.

Read before the Pathological Society of Philadelphia, April 8, 1875.

BY R. M. BERTOLET, M.D.

CONSIDERABLE diversity of opinion has for a long time prevailed among pathologists, and even exists at the present day, as to what actually constitutes the morbid process which underlies and induces the extensive ulcerations of the laryngeal and tracheal mucous membranes so frequently marking the termination of pulmonary phthisis. Modern research has dissipated many so-called tuberculous masses. Thus, the "crude tubercle" of Laennec has been resolved into simple caseous pneumonia; while "phthisis renalis" has been proven to be, in the majority of cases, minute capillary embolism, or inflammatory foci; the miliary tubercle being something altogether accidental.* This same tendency to limit strictly the term "tuberculous" to cases in which the actual presence of the miliary granulum is clearly demonstrable has likewise been applied to the affections of the larynx, with the result that now many deny *in toto* the eruption of tubercles in this site of the body.

The unusual activity which has been awakened in the study of diseases of the throat since the invention of the laryngoscope places it beyond a shadow of doubt that much of what was formerly designated as laryngeal phthisis has no connection whatever with tuberculosis. Yet I think the mark has been over-reached by those who disclaim entirely the tuberculous character of all laryngeal ulcerations. The proneness which tubercle, when seated in the laryngeal mucous membrane, exhibits towards necrobiosis explains, in a measure, the fact why, in this site, it so often escapes detection; tubercle being no longer recognizable as such when once it has undergone caseation and softening. There is nothing characteristic in the broken-down débris of tubercle.

In the literature on this subject we find two views entertained,—one group of authors maintaining that tubercle does not occur in laryngeal ulcerations, while the others ascribe an important rôle to tubercle in these affections. Among the former may be cited Rühle,† who, after years of diligent search, found but two specimens of miliary tubercle among hundreds of laryngeal and tracheal ulceration of phthisical patients. Most frequently simple catarrhal or follicular ulcerations were observed; the latter especially at those points of the larynx where the racemose glands are aggregated,—namely, upon the posterior surface of the epiglottis, upon the upper portion of the posterior laryngeal wall,

and in the Morgagnian ventricles. Türck,‡ also, and with him many others, adopt the view of their mode of origin which was first studied and promulgated by Rheiner.§ The catarrhal inflammation which forms the basis for the ultimate loss of substance is characterized as a destruction of the epithelium, and a thick cellular infiltration of the mucous and submucous tissues. This infiltration Rheiner regards "as a uniform proliferation of pre-existing elements." The margins of the ulcerations are usually pale, and thickened by a serous or oedematous infiltration. Papillæ, which, according to Rheiner, do not normally occur in the larynx, appear in the vicinity and upon the margins of old ulcers.

Rindfleisch|| very graphically describes the various pathological appearances induced by the chronic infiltration of the laryngo-tracheal glands, and asks, "If the weightiest and gravest disturbances of the larynx and trachea are alone induced by catarrhal inflammation and ulceration, what is left for tuberculosis to perform? Do tubercles at all occur in 'phthisis laryngea,' and what rôle do they play?" This author, while admitting having found cellular foci in still intact portions of the connective tissue recalling the appearances of miliary tubercle, ascribes to them no higher value than that of a permanent irritant, and thus accounts for the persistency and tendency to recur which is so characteristic of these catarrhal inflammations.

Of those who, on the contrary, view the lesions in question as decidedly tuberculous, we need but mention Virchow and Rokitansky. According to the latter,¶ tubercles occur in the laryngeal mucous membrane, as in most other mucous membranes, in the form of small granulations or massive infiltrations. From their destruction ulcerations appear, which are, therefore, of positive tubercular nature. These often extend into the submucous tissue, have hard, raised, undermined edges, often having "papillary vegetations" covered with excessive epithelial formations. In the vicinity occur injection, redness, swelling, and oedema. This is the mode of the development of the primary tuberculous ulceration, which by confluence with others, and partly by the breaking up of fresh tubercles upon the margins, brings about the secondary ulcer.

Virchow** as positively asserts the presence of tubercles in the larynx, and further points out that when seated very superficially in the membrane they are apt to soften and form small, shallow, simple tubercular ulcerations without even having ever undergone caseation or attained a size appreciable to the naked eye.

After excluding the catarrhal ulcerations, which have been so often mistaken for tuberculous, there still occur a limited number of ulcerations in which it is possible to demonstrate the existence of miliary tubercles in those parts of the mucous membrane

† Türck, Klinik d. Krankh. d. Kehlkopfes, Wien, 1866, S. 263, 355.

‡ Cannstatt's Jahrb., Jahrg. 1853, Bd. ii. S. 55.

§ Lehrs. d. Pathol. Gewebelehre, Zweite Aufl., S. 329.

¶ Rokitansky, Lehrbuch d. path. Anat., Bd. iii. S. 27.

** Virchow, Geschwülste, Bd. ii. S. 644.

* Ebstein, Nierenkrankheiten; Ziemssen, Handb. d. spec. Path. u. Therapie, Bd. ix. S. 35.

† Kehlkopfkrankheiten, Berlin, 1861, p. 261.

where the mucous glands and their ducts remain unaffected. In one of the three specimens of the human larynx and trachea which are herewith presented to the Society, this is very notably the case; the extensive loss of substance is remarkably limited to the mucous membrane directly covering the tracheal rings and the vocal cords, and although a number of the tracheal cartilages are laid bare by the ulcerative process, yet we find the intercartilaginous spaces, the posterior surface of the epiglottis, Morgagnian ventricles, and other points which are most abundantly supplied with mucous glands, unaffected.

In the two other specimens, the ulcerations are more extensive, but limited principally to the glandular localities; yet at certain distances from the oedematous and papillary margins I have also found in them unmistakable miliary tubercles beneath an attenuated epithelial covering. All of these specimens were obtained from exquisitely pronounced cases of tuberculosis. I will not delay to give their clinical histories, save a brief synopsis of the first case, which is interesting not only from the fact that it is eminently a tubercular and not a follicular process, but illustrates the probable manner of infection (auto-inoculation), and the extreme rapidity with which these ulcerations may be developed.

J. W., aged 36, a laborer, native of Bavaria, was admitted into the German Hospital March 19, 1875, and died upon the 25th of the same month. He had been an inmate of the institution upon two former occasions during the last year and a half, then presenting all the physical and subjective symptoms of chronic pneumonic processes in the apices. The troublesome cough and abundant expectoration were successfully combated upon both occasions, and the patient, rapidly regaining his strength, was enabled to resume his ordinary labors, which subjected him to much out-door exposure. No laryngeal complications presented themselves in his earlier attacks, but upon his last admission there was marked aphonia; hoarseness only developed a few days before. The sputa were muco-purulent, but not very abundant.

There were at once detected all the physical signs of small vomicae in the apices, and increased vocal fremitus, and impairment of the resonance, extending posteriorly to the base of the lungs. Subcrepitant râles, both anteriorly and posteriorly, were heard upon auscultation; cavernous respiration in the infra-clavicular region. The heart-sounds were normal. The urine was of a high specific gravity, loaded with urates, but free from albumen.

The patient had been actively employed until within a week previous to his entrance into the house, and presented a robust appearance, which was far from indicating the serious malady with which he was affected. However, the previous history, together with the rapid pulse, the hurried respirations, and the extremely high temperature (never under 100° F. during the entire six days) left little doubt that acute tuberculosis had supervened upon the breaking down of old caseous foci seated in the lungs.

The patient very rapidly lost strength and emaciated; the bodily temperature continued excessive in spite of large doses of quinine and other antipyretic remedies. There were, as is ordinarily observed in these cases of tuberculosis, marked morning exacerbations, the temperature exceeding by three or four degrees that noticed in the evening. The febrile disturbances were attended by digestive derangements, and, upon the last few days,

profuse diarrhoea set in; stools slightly tinged with blood.

A laryngoscopic examination showed a congested condition of the entire laryngeal mucous membrane, with a few punctiform yellowish prominences upon the posterior surface and margins of the epiglottis. Only the most superficial ulcerations could be detected upon the upper and inner surfaces of the vocal cords. No satisfactory view of the trachea was obtained, and, not desiring to fatigue the patient, all further attempts at examination were discontinued.

Autopsy.—The body was noted as considerably emaciated; firm pleuritic adhesions existed over the upper lobes; about an ounce of serous effusion in both pleural cavities. A caseous infiltration partially solidified both the upper lobes; disseminated throughout these, and less uniformly in the lower lobes, were numerous gray miliary tubercles. A cavity the size of an English walnut, with ragged walls, had formed in each apex. There was peribronchial induration of the adjacent bronchioles, which at many points were dilated and plugged with yellow, cheesy masses, while the mucous membrane was inflamed and at many places ulcerated. There was hypostatic oedema in the posterior and pendent portions of the lower lobes; bronchial glands enlarged. There were numerous equatorial ulcerations of the small intestines, the mesenteric glands being moderately enlarged. There was considerable intumescence of the liver, spleen, and kidneys, the former being fatty, and the latter showing cloudy swelling of the cortical epithelium. No miliary tubercles were detected in these organs.

The larynx and trachea obtained from this case, as previously stated, exhibit very extensive destruction of the mucous membrane covering many of the tracheal rings, and superficial erosions upon the vocal cords. Portions of this and of the other specimens were frozen, and thin sections made of them in the fresh condition, while other parts were hardened in a solution of chromic acid. The result of the microscopic examinations may be briefly summarized as follows: a diffuse cellular infiltration of the tissues around the mucous glands and their ducts, extending from the margin of the ulcerations far into the adjacent mucous membrane, giving it a finely granular appearance. Under higher powers this resolves itself into a lymphadenoid tissue with cells of a roundish shape, usually having a large nucleus. A finely reticulated net-work, generally fibrillated, or else minutely granular, separates the cells. Often the glands are hypertrophied and their ducts occluded with secretion; yet this peculiar net-like tissue is also found around follicles which present a normal appearance. It is also found at points, but always sub-epithelial, where no ulcerations have yet occurred, the mucous membrane being still intact. Very often, however, the epithelial covering is elevated and attenuated, beneath being found a circumscribed mass with a large, compact, granular centre. The readiness with which the periphery of this nodule takes up carmine, its multinuclear giant cells, its reticulum, and its entire appearance, leave room for no other interpretation than that of tubercle. Confirmatory observations of these appearances, with most excellent microscopic illustrations, have been made by Wahlberg,* who, in his exhaustive studies upon this subject, also minutely

* *Medicinische Jahrbücher*, 1872, Taf. VII.

describes the various alterations occurring in the squamous and cylindrical epithelium. Wahlberg ascribes the localization of this peculiar adenoid infiltration in the parts around the mucous glands and their ducts to the fact that they are surrounded by an extremely well-developed capillary net-work.

I have been very much interested in noting the liability, in this and in a great many other specimens where the tubercular and not the catarrhal processes predominated, of the mucous membrane covering the sharp projecting edges of the tracheal rings and vocal cords to become involved first. If we consider how nearly uniformly successful the attempts at inoculation with tuberculous material have proven, the sputa alone of tuberculous patients sufficing, to say the least, it cannot but appear plausible that the same matter should possess equally infectious properties whilst still remaining in the human body, especially so when the circumstances attending its engrafting are so unexceptionably favorable. The tenacious sputa clinging to the tracheal walls and exerting their greatest pressure and friction upon the projecting ridges not only exercise a deleterious influence upon the epithelium, but also cause a hyperæmic condition of the underlying capillaries; the moment arrives when the sputa are loaded with tuberculous elements, some of them still, perhaps, possessed of amœboid movements, and the ground for this tubercular seed is in excellent tillage, and freely supplied with running streams of lymph and blood.

Another reason suggesting and favoring this view of a local infection by the direct contact is the infallible precedence of a tubercular process in the lungs. This statement is only apparently at variance with the ground held by many of the best laryngoscopists, that tuberculous laryngitis may be developed before there are any lung-complications, since they are disposed to designate by this same term ulcerative laryngitis even when dependent upon mere chronic follicular inflammations; and I doubt very much whether a rigid discrimination beyond the mere site of the ulcerations is possible, for miary tubercles are not recognizable as such by the laryngeal mirror.

In all the autopsies where I have succeeded in detecting true tubercular ulcerations of the throat and windpipe, I have invariably found tubercles existing in the lungs. Should this view of their growth in the trachea and larynx by local inoculation be corroborated by further observations, then the statement made by Louis, that the sharp secretions of the sputa excoriate the mucous membrane, is after all not quite so absurd. Curiously enough, however, Louis denied the tuberculous character of all laryngeal ulcerations.

A CASE OF HÆMOPTYSIS PRECEDING AND ACCOMPANYING LABOR.

BY HENRY B. REED, M.D.

MRS. M. K., æt. 38; born in Ireland; washer-woman by occupation; of intemperate habits; came under my care May 5, 1875. I found her sitting

in a chair, with her feet in mustard-water, and having a basin in her lap containing about a teacupful of uncoagulated, bright red, and frothy blood. She wore a very anxious expression, and she told her husband, who was near her, that she was dying. Her pulse was 120, and full; there was great uneasiness in the chest, and great difficulty in breathing. Skin was covered with a cold sweat.

The history of the case, as derived from herself, is as follows. Early in the fall of 1874 she took a severe cold, while washing, which laid her up for about a week, and since that time she has had a cough and shortness of breath on slight exertion, loss of flesh, and, lately, swelling of the feet, cough more persistent, especially at night, and almost always accompanied with the expectoration of frothy, greenish, and yellow sputa, sometimes tinged with blood, and profuse and exhausting night-sweats. She was pregnant, and had expected to have been delivered on the day previous to the one on which I first saw her. The hemorrhage from the lungs came on while "hanging up clothes." Both her father and mother died with lung-troubles. I did not deem it necessary or advisable to make a prolonged physical examination when I first saw her, but simply placed my ear to the chest, and detected low gurgling sounds at the apex air-tubes of the right lung. Ice was applied to the chest, and ten grains of gallic acid given every half-hour for two hours, to insure an arrest of the hemorrhage. Spt. ether. comp. was given in one-drachm doses every three hours, to relieve the dyspnœa.

May 6.—Patient quite comfortable. No signs of approaching confinement. During an occasional cough, the patient would spit up dark clots with sputa.

May 8.—Up to this time the patient has remained in a comfortable condition, but is only able to rest while sitting up. 9.30 P.M. I found her in labor-pains, with a second hemorrhage from the lungs. I determined to accomplish as hasty a delivery as possible, on account of her great efforts in breathing. The bag of waters was ruptured, the forceps applied, and she was delivered of a fine, large, female child. 3i of vin. ergotæ administered. The hemorrhage ceased in a few minutes, the placenta came away, and the oppression in breathing was greatly relieved.

May 9.—Physical examination revealed an extensive cavity at the apex of each lung. Feet of the patient much swollen, and pit on pressure. Some dyspnœa.

Since May 9, the patient has been sinking gradually, notwithstanding the administration of tonics and nourishing diet. She has had no more trouble from hemorrhage, and has been feeling easy.

Wednesday, May 26.—Patient died.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF PROF. NEILL, MAY 15.

Reported by DR. J. WILLIAM WHITE.

GNORRHŒA.

CASE I.—We have here to-day in this lad a typical case of gonorrhœa, and, although you have already seen many similar cases, I will take this opportunity of impressing upon your minds a few of the more important points connected with this disease and its treatment. In the first place, remember that we are speaking of a true specific affection, not of an ordinary urethral catarrh, —of a disease which in all cases results from the applica-

tion of a peculiar poison, which follows impure and indiscriminate connection, and which is highly contagious. It is a true venereal disease, that term at the present day being used to include the local contagious chancre or chancroid, syphilis, and gonorrhœa, each of which diseases propagates itself and no other. We must not, therefore, consider that it is to be compared with the various non-specific inflammatory diseases that may attack the genito-urinary organs, or with the mucous or muco-purulent discharges which take place from the eyes, the nose, or the bronchi. These are usually not inoculable and not contagious. Neither will these or similar diseases produce gonorrhœa. It is not a case of evolution from bronchitis or cystitis, but arises from the presence of a specific germ, which has a definite life and individuality, and did not grow out of anything else.

With the usual symptoms and causes of this disease I presume you are all familiar. After the exposure to contagion there is a stage of incubation, lasting from three to five days, followed by a sense of heat and itching around the external meatus, the lips of which become red and swollen. On squeezing the urethra, a few drops of mucous pus can generally be forced out. The discharge becomes more abundant; there is intense pain during urination, which is often more frequent than natural; chordee occurs; there is often some constitutional disturbance, fever, headache, etc., and then these symptoms subside, the inflammation becomes subacute, and, under proper treatment, disappears in the course of a few weeks.

In regard to the treatment of this disease, a very false notion prevailed among our professional predecessors, and has been inherited from them.

The common treatment of gonorrhœa used to be, and to a certain extent still is, the administration of stimulating resinous diuretics, principally cubebs and copaiba. The abuse of these medicines is worse than the disease itself, and they have undoubtedly been the cause of much of the chronic urethritis and cystitis which now exist. They have also been productive of much dyspeptic trouble, especially since the introduction of capsules, admitting of such large doses. You may therefore lay this down as a rule in the treatment of gonorrhœa: never begin with cubebs or copaiba. In such a case as this, and indeed in nearly all cases, at this early and inflammatory stage I should direct the following prescription:

R Potassii bitart., ℥iv;
Potassii nitrat. (pulv.), ℥iij;
Potass. et antimon. tart., gr. i.

This should be ground in a mortar and thoroughly incorporated, and then divided into twelve powders, one of which is to be taken three times daily.

The result will be at once an increased action of the kidneys and the whole genito-urinary tract, which will diminish the vascularity and hyperæmia of the urethral mucous membrane. The discharge will, perhaps, at first be somewhat increased, and it is as well to mention the possibility of this to the patient, but it will then in its turn diminish, and in ten days will almost invariably be much less. In conjunction with this treatment you may order urethral injections, consisting at first merely of cold water, and afterwards of some astringent, such as the sulphate or chloride of zinc or nitrate of silver, but never stronger than half a grain or a grain to the ounce. At the same time, the amount of solid food should be restricted, large quantities of water and alkaline drinks should be taken, and the use of spirituous liquors, violent exercise, and sexual excitement should be strictly avoided. The prejudice which exists against coffee, salt meat, etc., I believe to have no philosophical basis.

BUBO FROM INVERTED TOE-NAIL.

Case II.—This patient is a plumber by trade, twenty years of age, and is, as you see, of a lymphatic temperament. He has been out of work for some time, and is rather poorly nourished. About six weeks ago he noticed a swelling in his groin, which was at first tender and painful, but which gradually became insensitve, although continuing to increase in size. There is no existing venereal disease, and he denies having been the subject of any,—which is probably true, as there are many cases of bubo not connected with any specific disease. When they do arise from such causes, there are usually one or two glands affected; but here there is a general glandular enlargement in the whole groin, all the glands and the intervening cellular tissue being affected. Such a bubo frequently follows any little point of irritation or any unusual demand upon the system, such as a long walk, especially in persons of a broken-down constitution. On examining this patient closely, we find that he has an inverted toe-nail, which is doubtless the primary cause of his trouble, as it is amply sufficient to account for it; we will cure this, and will probably at the same time cure the bubo.

CONTUSION OF RIBS.

Case III.—You examine cases of injury to the ribs, where there is a suspected fracture, by placing one hand on the sternal and the other on the dorsal extremity of the ribs, and pressing them together. If there is fracture you will produce pain and crepitus; but you should remember that there is often as much pain associated with bruising of the periosteal or perichondrial coverings of the ribs or of their cartilages as with fracture. The treatment is the same in both cases. Strips of sticking-plaster should be applied, one over the other, and running around the side of the chest from the spine to the sternum, so as to secure complete rest of the affected side.

(Cases of gonorrhœal bubo and hydrocele were shown to the class and were operated upon.)

PHILADELPHIA HOSPITAL.

SERVICE OF PROF. H. C. WOOD.

Reported by Dr. JOHN M. RADEBAUGH, Resident Physician.

SUDDEN DEATH IN ACUTE RHEUMATISM FROM RUPTURE OF A SMALL ANEURISM INTO THE PERICARDIUM.

W. O'B., æt. 40, Ireland, entered the medical ward May 20, 1875, late in the afternoon. He complained of pain in the knees, elbows, and phalangeal joints of the front and middle fingers of the left hand. He had suffered with these pains for two weeks previous, but had never, until that time, had any symptoms of rheumatism.

May 30, 1875, A.M.—On auscultation, a distinct murmur was heard with the first sound of the heart, which was loud and rough, and simultaneously a rough friction-like sound. Pulse was 130. At 7.30 P.M. he was comfortable. About 9.45, patient called nurse for a drink of water. Immediately after he threw up his hands, screamed twice, and was dead.

Post-mortem examination showed lungs healthy, but on the diaphragmatic pleura of the right side large fungus-like projections of false membrane. The pericardium was filled with a black clot, which completely surrounded the heart. There was an aneurism of the aorta, of moderate size, not sacculated, within the pericardium, and a small point of rupture just at the attachment of the pericardium. There was no peri- or endocarditis, and valves were normal. The ventricles were much hypertrophied.

TRANSLATIONS.

ON THE EFFECT OF DIRECT FARADIZATION OF THE VENTRICLES OF THE DOG'S HEART (A. Vulpian: *Centralblatt für Chirurgie*, No. 15, 1875).—In these experiments Vulpian thrust needles into the heart, either through the walls of the thorax or directly into the substance of the heart, after providing for artificial respiration and opening the thoracic cavity. These needles were then connected with the poles of the electrical apparatus and powerful induced currents passed through them. There occurred immediately, even when the needles were inserted only into the right side of the heart, active muscular tremblings in both ventricles, which occurred at various points, lasted four or five minutes, and then passed into mere twitching of fibres. After a period of three or four minutes more, the ventricles passed into diastolic quiet.

The same results were seen when the induced current was allowed to flow but for one or two seconds, or when, for instance, the electrodes were placed upon the heart and at once removed. No changes in the phenomena were noticed when the animals, previous to the transmission of the current, were brought under the influence of chloral or woorara.

After the cessation of the twitching of the fibres and the appearance of diastolic rest, the muscular tissue of the heart could no longer be excited by direct or reflex irritations.

Since these results of faradization were not changed by section of the pneumogastric nerves, nor by the previous administration of atropine, which is supposed to paralyze the terminations of the vagus in the heart itself, Vulpian concludes that the action of the current is exclusively upon the muscle of the heart.

Similar results were given when but one electrode was thrust into the heart, the other being allowed to rest upon some portion of the skin.

Only when feeble currents are employed are these symptoms transitory, followed by a return of the normal actions of the heart.

The observer, therefore, thinks that this electrical irritation gives rise to a kind of spasm of the muscle of the ventricles, by which they are prevented responding with rhythmical contractions to motor impulses which they receive from the cardiac ganglia. The spasmodic trembling which occurs most probably exhausts with rapidity the irritability of the muscular tissue of the organ. When the spasm ceases, the ventricles are no longer in a condition to be restored to activity by the nervous impulse, and therefore a total and final cessation of cardiac movement occurs. The knowledge that a fatal result to the dog follows these experiments must, at all events, arouse a dread that similar consequences might be met with in man. Since S. Mayer has also reached virtually the same conclusion, until further experience has been had it must be regarded as unjustifiable to endeavor to arouse the heart to action, in cases of sudden and alarming syncope, by electro-puncture, the use of which has been advised by some authorities.

W. A.

COMPRESSION OF THE AORTA IN GRAVE HEMORRHAGES FOLLOWING ACCOUCHEMENT.—In a letter to the *Bull. Gén. de Thérap.*, May 15, Dr. Berenger-Féraud recounts the following case:

He attended, in November, 1863, with Dr. Demarquay, a primipara in whom labor was rendered difficult by the disproportion between the maternal organs and the fœtus. Delivery was effected with the aid of the forceps, the child being born alive and in good condition, but a slight laceration of the perineum resulting in the mother. A few minutes later, while Dr. B. was examin-

ing the wounded perineum, he observed a sudden gush of blood from the vagina. The jet was nearly two-thirds of an inch in diameter. In less than six seconds it furnished between four and five pints of blood. As quick as thought the doctor leaped to the side of the patient's bed, tore off the clothes, and applied his hand firmly as a compressor over the umbilical region, forcing the aorta against the vertebral column. Dr. Demarquay, who was at the other side of the room, hastened to the patient, and arrived in time to confirm Dr. B.'s impression as regarded the size of the blood-jet. Having ascertained that the manual pressure controlled the hemorrhage, Drs. B. and D. practised friction upon the abdomen in order to contract the uterus, which was flaccid and relaxed. At the end of about ten minutes the uterus had recovered its tonicity and was contracted; compression was then suspended without recurrence of hemorrhage.

The amount of blood lost even in the brief interval before compression could be made was very large, and the patient showed all the symptoms usual after severe hemorrhage. No other means, says Dr. B., would have availed in this case. Tamponing the vagina would have cost the life of the patient by internal hemorrhage, since the uterus in its uncontracted condition would have contained a clot of at least four quarts before offering sufficient resistance to oppose the escape of blood. Neither external nor internal manipulation, nor the injection of styptics, could have been practised in anything like time to save the patient's life. X.

A CASE OF GASTRO-PULMONIC FISTULA FOLLOWING PERFORATION BY GASTRIC ULCER.—Inlinsberger communicates a case of this kind to the *Berlin. Klin. Wochenschr.*, 1874, No. 51. The diagnosis was made during life, as the very offensive sputa, in part fluid and in part muco-purulent, contained fragments of food, and, in addition, after each expectoration the previously prominent epigastrium became flattened.

The communication between stomach and lungs was attained in the following manner: the pyloric portion of the stomach was adherent to the liver near the suspensory ligament; a large opening existed in the posterior wall of the pylorus, above which was situated a cavity the size of the fist, filled with air and putrid matter. The walls of this cavity were formed in front and to the right by the chest-walls, below by the liver, to the left by the stomach, above and behind by the diaphragm. The latter was adherent to the pleura and lung, and presented an opening similar to the one leading into the stomach. The bronchia, opening into this cavity, conveyed the contents of the stomach into the trachea. Several tumors were found in the stomach, some of which were just breaking down into ulcers. X.

CROTON-CHLORAL IN DISEASES OF CHILDREN AS COMPARED WITH CHLORAL-HYDRATE.—Bouchut (*Centralbl.*; from *Gaz. Méd. des Hôpitaux*) is inclined, from his experience with croton-chloral, to attribute to this drug only trifling results, compared with those obtained from chloral-hydrate. While the latter in doses of forty to sixty grains will produce such perfect anæsthesia that abscesses may be opened and teeth extracted without pain, croton-chloral, even in drachm doses, scarcely causes sound sleep. The single advantage possessed by croton-chloral is its more agreeable taste. Bouchut has compared both remedies in chorea of children, and gives chloral-hydrate decidedly the preference. (According to Liebreich, croton-chloral, the taste of which is intensely bitter, acts chiefly upon the nerves of the head. In a solution in water of two scruples to six ounces, given in dessertspoonful doses every two hours, stubborn hyperæsthesia of the trigeminus has been cured in many cases and relieved in others.) X.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JUNE 19, 1875.

EDITORIAL.

TRANSFUSION.

PROF. MOSLER, of Greifswald, has recently reported in the *Berliner Klinische Wochenschrift* (May 17) the details of a case in which a woman who had for some hours lain pulseless and unconscious from intestinal hemorrhage due to typhoid fever was immediately and permanently revived by transfusion practised into her radial artery. Defibrinated blood from a healthy man was used. This is said to be one out of four cases, and the second successful one, in which transfusion has been used in the hemorrhage of enteric fever. There is one point in the case to which we desire to call especial attention. Prof. Mosler performed the operation in the unusual way employed, avowedly to avoid the risk of distending and thereby paralyzing an excessively weak right ventricle. Several cases abroad have proved instantaneously fatal from cardiac paralysis, evidently simply the result of over-distention of a right heart already scarcely able to fulfil its duties. One of the most terribly dramatic scenes we ever saw owed its chief interest to the same misfortune. The patient, a little French boy, in a foreign clime, pale and waxy from advanced leucocythæmia, surrounded by doctors, sat up in bed with an expression of mortal terror as he watched the preparations for the operation: screaming when the trifling incision was made; outwardly calm, but panting, with nostrils distended, as the syringe was introduced into the canula. Suddenly, as the piston went up, a frightful deadly pallor, a look of

mortal agony, a start and a cry, with upthrown arms, "Mon Dieu! je vais mourir!" a gasp, a shudder, a heavy fall back upon the pillows, and the life was ended.

In this case, at the autopsy, the cardiac walls were found to be thin, and the muscles degenerated, whilst a large pericardial effusion added to the heart's embarrassment. As there was no reason for suspecting any entrance of air into the veins, the death was evidently wrought out in the manner described.

VENTILATION IN ZOOLOGICAL GARDENS.

IN the London Zoological Gardens five-sixths of the monkeys are said to have died in one month,—largely, as was pointed out by Dr. Neil Arnott, from improper ventilation. In our own garden the keepers attribute the very great success which has attended the acclimating of the giraffes to the extreme care given to the ventilation of the house. In New York, it is stated, the whole herd died during the winter; but here, out of six, four have been saved, and of those which died, one apparently received fatal injury on the voyage. The keepers of animals clearly recognize what keepers of men sometimes forget,—that good ventilation implies not merely sufficient changing of air, but also avoidance of draughts. This is particularly true of the camelopard: the same anatomical character that made Charles Dickens affirm that when he first tasted a sherry cobbler he wished he was a giraffe, renders this animal especially liable to fatal sore throat.

VIVISECTION.—The Home Secretary having stated that it is the intention of the Government to issue a small Royal Commission to make inquiries about vivisection, so called, "in order that they may have full information before they attempt to legislate on the subject," both of the bills to regulate the practice of vivisection in the British Islands, of which we recently spoke, are to be withdrawn. This solution of the matter appears to us a very fair one, and it seems not too much to hope for a fair, candid, and authoritative statement of the facts of the case. The profession may well court investigation.

THE "venerable Dr. Bullard," of New Haven, it is said, has been the high-priest at Hymen's fruition on over one thousand occasions. It is affirmed that the youth and maidens are "to hold a grand reunion and picnic" at his residence. For parents and children to hold a grand reunion would be suggestive; but the toast of the occasion will, we sup-

pose, be "The tie that binds us—Dr. Bullard, our common deliverer." Young men and maidens will share their common memories as they stroll over the lawn or whirl in the giddy mazes of the dance.

DR. S. WEIR MITCHELL has been elected Trustee of the University of Pennsylvania, with, of course, a special regard to the Medical Department. "Lesser than Macbeth, and greater. Thou shalt get kings, though thou be none."

ACCORDING to one of our exchanges, it has been found that invalids can be transported by rail with the greatest comfort in hammocks swinging from the ceiling of the car.

DR. GIBSON MAHON, of this city, was sentenced on the 11th instant to seven years' imprisonment at hard labor and to pay a fine of five hundred dollars for producing an abortion. Dr. Perpente is still in prison, awaiting the result of a motion for a new trial.

M. CALMETTE has demonstrated that the position of the arm affects most extraordinarily the sphygmograph: when the arm is held vertically the exact tracing of aortic insufficiency is obtained.

CORRESPONDENCE.

PENNSYLVANIA STATE MEDICAL SOCIETY.

POTTSVILLE, June 12, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

THE occasion of the Twenty-sixth Annual Meeting of the Pennsylvania State Medical Society will be long remembered, not only by reason of the large number of delegates present, but also on account of the peculiarly satisfactory manner in which the business and pleasures of the occasion were managed. Over one hundred and thirty delegates registered in the course of the session,—a larger number than ever before met together in our State convention.

The meeting was called to order by President Washington L. Atlee, at four o'clock, Wednesday, and after a prayer by Dr. Traill Green, of Easton, the address of welcome was made by Dr. A. H. Halberstadt, Chairman of the Committee of Arrangements. After the usual congratulatory remarks, Dr. H. referred to the often-discussed subject, "the advancement of the medical profession to that high position which their vocation would seem to demand, but which legislation has as yet failed to obtain." The remedy suggested by Dr. H. as the only one by which this can ever be accomplished would require of the student of medicine, before beginning its study, certain literary qualifications without which he dare not lay claim to the influence which every physi-

cian should command; and after this a full three-years' course of study, instead of the two five-months' courses now exacted of him. Such a course was found to be universally popular with the numerous members of the profession met at Pottsville, so that it can no longer be said that the people of Pennsylvania at least are not ready for this reform.

After the transaction of some routine business, written communications were called for, and the Secretary, Dr. Atkinson, read a paper by Dr. O. H. Allis, of Philadelphia, describing his apparatus for the inhalation of ether, already known to the readers of the *Medical Times*. The President, Dr. W. L. Atlee, made some remarks highly approving the apparatus. By its means he had become able to use pure ether in the performance of surgical operations, instead of the mixture of ether and chloroform previously used on account of the excitement ordinarily induced in the administration of ether.

Dr. Levis, of Philadelphia, did not like this or any other special apparatus for the inhalation of ether. In his experience he had found it uncleanly, as well as liable to injure the face of the patient through compression by the wire rim, and in one instance the patient had knocked it from the hand of the etherizer to the other side of the room.

Dr. Keyser, of Philadelphia, concurred in Dr. L.'s remarks; but President Atlee said these objections ought not to be ascribed to the apparatus, but lay in a want of care on the part of the operator.

At the conclusion of the session on Thursday afternoon, Dr. Allis, who was not present when the paper was read, administered ether by his apparatus in the presence of the Convention, and in four and a half minutes had so far completed the etherization as to make it evident that in at most a minute more the man would have been completely etherized.

Dr. John T. Carpenter, of Pottsville, exhibited the results of an exsection of the elbow-joint, in the arm of his brother, a bright lad of about eighteen years, who had accidentally shot himself in the past winter. The result was a truly remarkable one. All the motions of the joint were complete, and there was considerable strength in the arm, a chair being lifted with facility some distance from the floor. Indeed, the doctor informed us that the strength of the arm had diminished in the past month in consequence of the lad's playing baseball and otherwise using the arm in an excessive degree.

Dr. Keyser, of Philadelphia, read the results of some forty-seven cases of cataract operated upon by him by Graefe's peripheric linear method, in which a better percentage of results was obtained than where iridectomy was not performed, although in some respects this operation is not to be preferred. Dr. K. also explained the method of recording results.

In the evening, at eight, the Convention listened to the address of the President on "Old Physic and Young Physic," which consisted in a comparison of the practice of the present day with that of thirty years ago. In the contrast drawn, at times "Old Physic" appeared to

advantage, and at times "Young Physic." The chief misfortune of "Young Physic" consisted in his neglect of blood-letting, which was shown to have often been of signal advantage in the hands of "Old Physic" for the alleviation of symptoms; while in the free use of cold water and diluent drinks in fever, and the progress made in the knowledge and treatment of diseases of women, "Young Physic" was decidedly in the ascendant. The influence of the dress of women of to-day in producing their diseases was dwelt upon, and congratulations were made upon the successful establishment of a Woman's Medical College.

After the conclusion of the address, the delegates repaired to the house of Dr. Halberstadt, where they were most handsomely "received." The spacious parlors of the doctor were crowded, and the hum of voices busy in the exchange of greeting and sentiment only ceased at a late hour as the company separated. We can scarcely recall an occasion where the enjoyment seemed more thorough.

SECOND DAY.—The chief events of the morning session were the reading of the papers on Medicine and Surgery, the former by Dr. William Pepper, and the latter by Dr. Richard Levis, and an excellent report on Hygiene, by Dr. Lee, of Philadelphia. The address of Dr. Pepper, which made a most favorable impression, consisted in a review of diseases added to the nosology in recent years, and of the therapeutic advances in the same period, including the exhibition of instruments recently made available in therapeutics, among which were apparatus for transfusion and for deeply injecting such organs as the lungs, clinical thermometers, etc.

Dr. Levis's paper was upon fractures of the lower end of the radius, in the course of which he stated that the most usual fracture was a transverse one one-fourth to three-fourths of an inch above the lower end of the bone. He also showed that the existence of the fracture usually described as Barton's, the essential feature of which was a chipping off of a fragment of bone communicating with the joint, was exceedingly rare, if ever occurring. He concluded by exhibiting an ingenious apparatus for producing extension, which he considered essential in the treatment of fractures of this end of the radius.

Dr. Lee's address, after a graceful tribute to Hygeia, included an account of the contamination of water and milk, and its influence on the production of typhoid fever by fecal excreta, confirmed by the history of several epidemics. The importance of ventilation and the best means of securing it were considered. The method of Mr. Barker, of Germantown, as adopted in the new University buildings, was described and illustrated by diagram.

Dr. Lee concluded by offering a resolution to the effect that a committee of three be appointed to memorialize the Legislature and to take such other steps as will secure the appointment of a State Board of Health. Drs. Atkinson, of Philadelphia, Traill Green, of Easton, and Orth, of Harrisburg, were appointed.

In the afternoon session Dr. A. P. Carr, of St. Clair,

Schuylkill County, exhibited a miner who had suffered fracture of the skull, loss of an eye, and fracture of the thigh by the premature explosion of a blast. The skull had been trephined with good results.

Dr. C. also exhibited some of the calculi from forty-two cases of lithotomy performed by himself, of which only one was fatal.

Appropriate resolutions of regret and condolence with regard to the late Dr. D. Francis Condie were read by Dr. Nebinger, of Philadelphia, and unanimously adopted.

Dr. R. L. Sibbett, of Cumberland, read the report of the committee appointed at the last meeting of the State Association to secure proper legislation to protect the people against incompetent practitioners of medicine, surgery, and obstetrics, which had resulted successfully. Considerable discussion followed as to the best means of carrying out this law, participated in by Drs. E. A. Wood, of Pittsburg, and Roebuck, of Lancaster, members of the State Senate, and the matter was finally referred to the several County Medical Societies, with the request that they appoint a committee of three to secure the enforcement of the law.

Dr. Curwen, of Harrisburg, then read his report on "Mental Disorders." The general principle which should guide us in the detection of insanity is the comparison of the individual with his former self, rather than with any other individual. The general causes only of insanity were dwelt upon, among which the present vicious system of education received some attention. The address made a decided impression, and excited some discussion, the result of which was a resolution to the effect that Dr. Curwen be requested to furnish that portion of his address relating to the subject of education to State Superintendent Wickersham, for publication in the *School Journal*, and to the Educational Publication Committee of Philadelphia.

Five thousand copies of the Code of Ethics of the Society were ordered printed for general distribution.

Dr. Deshler, delegate from the New Jersey State Medical Society, being introduced by Dr. Halberstadt, made a most pleasing address, which was a pithy review of the proceedings, which he proposed to make to his Society on returning, and many parts of which he thought would be received with pleasure and surprise by his friends in New Jersey.

Dr. Turnbull, of Philadelphia, read a paper on "Disorders of the Eustachian Tube," and recommended suitable treatment.

Dr. Curwen, of Harrisburg, offered the following important resolution, which was adopted:

"Resolved, That a committee of eight members of this Society be appointed to prepare a memorial to the Legislature in favor of a hospital for the insane of the Counties of Berks, Bucks, Chester, Delaware, Lehigh, Montgomery, and Northampton, and to urge the passage of a law to establish the same."

Drs. Curwen, of Harrisburg, P. B. Brenning, of Northampton, W. M. Weidman, of Berks, Gilbert McCoy, of Bucks, H. Corson, of Montgomery, I. Price, of Chester,

L. Fussell, of Delaware, and E. G. Martin, of Lehigh, were appointed the committee.

Then followed a long discussion on the causation of typhoid fever, which amounted to a reiteration of the history of the numerous late epidemics, with which the readers of medical journals are all familiar.

The report of the Nominating Committee, which was adopted, provided for the following officers for the next meeting, to be held in Philadelphia on the last Wednesday in May, 1876:

President, Dr. Crawford Irwin, of Blair County.

Vice-Presidents, Drs. Andrew Nebinger, Philadelphia; A. H. Halberstadt, Schuylkill; R. L. Sibbett, Cumberland; and J. I. Ross, Clarion.

Corresponding Secretary, Dr. Thomas M. Drysdale, Philadelphia.

Permanent Secretary, Dr. William B. Atkinson, Philadelphia.

Recording Secretary, Dr. James Tyson, Philadelphia.

Treasurer, Dr. Benjamin Lee, Philadelphia.

Committee of Publication, Drs. William B. Atkinson, J. G. Stetler, Benjamin Lee, T. M. Drysdale, James Tyson, Albert Fricke, of Philadelphia, and Charles McIntire, of Northampton.

The event of the evening was a banquet given by the Schuylkill County Medical Society, at Union Hall, where strains of music, the din of voices, and tinkle of glasses combined to produce an occasion long to be remembered by delegates. The usual toasts were read, and were responded to by Drs. E. A. Wood, Atkinson, Nebinger, Allis, Messrs. Harris and Schoeffer, of the Reading Coal and Iron Company, Rev. Mr. Smiley, and others.

I will not detain you by an account of the delightful excursion of Friday, through the mining district, by the courtesy of the Philadelphia and Reading Railroad Company, and participated in by an unusually large number of delegates; suffice it that it was one joyous gala-day from early morning until evening, when the delegates were transferred to the main line of the Philadelphia and Reading Railroad, and distributed to their scattered homes.

X.

MASSANETTA SPRINGS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I desire to call attention to the value of the water of Massanetta Springs in chronic malarial poisoning. The springs, commonly called Taylor Springs, are situated four miles from Harrisonburg, near the peaks of the Massanetta mountains, in the County of Rockingham, in the Valley of Virginia.

It may surprise some of your readers to learn that there is a mineral spring which is accredited with the virtue of curing any form of chronic intermittent malarial disease, however debilitating, stubborn, or chronic. I am, however, really persuaded of this fact after a most careful investigation for many years, which has also shown me the value of this water in organic disease of the kidneys. This spring has been visited for

a hundred years by persons afflicted with what they deemed incurable agues. The tradition and belief in this county is universal that it has never failed to relieve every case. I have carefully investigated this tradition through such sources as the Hon. Judge Daniel Smith of the Court of Appeals of Virginia, Gen. Samuel Lewis, Hon. John F. Lewis, of the U. S. Senate, who lived all their lives close neighbors to the spring; I have sought out all the previous owners of the property and hotel proprietors of the springs. The oldest neighbors, some of them octogenarians, all assert from personal observation the restoration of health which has been afforded, and their belief is fully supported by medical evidence, very many of the physicians of this county having verified this belief in their own practice by sending their patients to the spring and watching the result. Among them I may mention Drs. Gordon Williams, Webb, Kyle, Minor, Kemper, and others. I have myself over and again seen the following results: most persons have only one chill after drinking the water at the spring; some have none; the lesser number have two; very few have three chills. Nor is it strange when you consider that, according to the late Dr. Rogers, of the University of Virginia, the water contains arsenicum, iodine, chlorine, potassium, sodium, magnesium, calcium, iron, free nitrogen and carbonic acid gases.

I will not occupy space by reporting individual testimony, excepting that of Dr. F. Asbury Effinger, who practised medicine in the Brazos Swamps of Texas,—as rank in malarias as any place in the country. He says, "I had chills for several years, and began to despair of recovery. I repaired to the Massanetta Springs, and soon recovered. I practised medicine for fifteen years afterwards on the Brazos River, and never had another chill."

Col. De Neale states that "he saw thirty-nine Confederate soldiers with ague put in hospital at the Massanetta Springs during the late war at one time, and in a fortnight every one was well."

The water is delicious, very soft, and wholly unirritating; a drink pleasant in all its effects upon the skin, kidneys, liver, stomach, and bowels.

There is a great deal of evidence to establish the value of the remedy in organic kidney-disease, and evidence of much weight, but I will give an account of its history in kidney-diseases at some future day.

Respectfully,

B. CHRISMAN, M.D.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 8, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

Epithelioma of the lip.

DR. C. B. NANCREDÉ presented two specimens of this affection. The patient from whom the first was removed, E. B., 78 years of age, first noticed about

six months ago a hard lump on the left side of the upper lip. He has been a great smoker, using a clay pipe. About four months ago ulceration commenced, rapidly progressing, and producing an excavated, deep, painful ulcer, with indurated edges, in size about that of a nickel cent.

It had been cauterized frequently by his physician, with nitrate of silver, which had only aggravated the trouble. The patient's general health was excellent, with no arcus senilis, or atheroma of the arteries. His heart-sounds were strong and normal, his hair luxuriant. There was nothing of special interest about the operation, which has proved, thus far, successful, it having been performed the 2d of February, 1875.

The second case presented by Dr. N. was removed from W. B., aged 78 years, who first noticed about six months ago a small wart-like projection on the left side of the lower lip, which grew rapidly, soon ulcerating and occasionally throwing small pieces off in the form of sloughs. No treatment was attempted till he came to him, when he found a mass, about the size of a chestnut, occupying a third of the free surface of the lip, ulcerated and covered with scabs.

When first seen, on the 22d of February, 1875, its removal by the knife was advised, which operation he performed two days later, with success so far.

There is one point of interest in connection with the first case,—viz., the occurrence of true epithelioma on the upper lip, where rodent ulcer is much the more frequent.

Dr. N. desired to hear some expression of members as to the origin of epithelioma, whether it be a hypertrophy of granular tissue, a return of the follicles to the foetal state, or whether the more recent view of Köster of the endothelial origin is to be preferred.

Dr. JAMES TYSON said he could not speak from personal investigation of specimens bearing upon this question, but, from a somewhat careful examination of the observations of others, he felt that while at first thought the formation of cylinders was best explained by their origin in re-solidification of the sebaceous follicles,—a return to their foetal state, as Dr. Nancrede expressed it,—he did not see anything in the way of admitting also Köster's view with regard to the extension of the epithelial protrusions along the interior of the lymphatic vessels, and thus allowing both modes of origin. Some of the members were probably familiar with some comparatively recent observations by Dr. Woodward, of the Army Medical Museum, which tend to support Köster's views.

Dr. R. M. BERTOLET said that the theory of an endothelial origin of epithelioma, as advanced by Köster, was very enticing, and that formerly, having used the nitrate-of-silver staining in a number of fresh growths, he was inclined to adopt this view, but, upon closer investigation, he found it inadequate to account for all of the alterations ordinarily met with in this class of tumors. The glandular apparatus of the skin in cases of epithelioma are so manifestly hypertrophied, there is, evidently, such an active proliferation of the epithelial lining of the sebaceous and sweat glands, that it was impossible to ignore the fact that they performed an important, if not the chief, rôle in the origin of these growths. No doubt the lymphatics served as convenient spaces for the ingrowing cancrroid tubuli, and the endothelia then became involved secondarily.

When we examine the analogous cylinder-growths upon the mucous membrane, there is no question but that primarily the mucous glands are solely involved; especially where the new growth assumes, as so often happens, the habitus of an adenoma. Further, we find that the metastatic growths preserve the type of the glandular structure whence the primary growth has sprung; and thus it happens that we come to find, as has been so aptly stated, rectum in the liver.

Owing to the comparative infrequency of metastases into distant organs, the same cannot be as positively asserted of epithelioma of the skin; yet when these secondary growths shall have been more fully studied, he predicted, it would prove that they also presented an imprint of a glandular and not an endothelial tissue.

Abscess of the lung.

Dr. JOHN GUITÉRAS presented the specimen, from F. W., æt. 26; colored. Was admitted on the 30th of March into the wards of Blockley Hospital. His friends stated to the nurse that he had been ailing with some chest-trouble for about two years.

On the 29th, the day before admission, he had a very severe chill, and on the evening of the 30th his temperature was 103°. On the 31st, morning temperature 100°; evening temperature 101°. On the 1st, morning temperature 99½°, pulse 105; evening temperature 100°. On the 2d, morning temperature 97°, pulse 84; evening temperature 98½°, pulse 80. This day Dr. G. saw him for the first time, and found him very drowsy, so that the only information he could obtain from him was that he had been ailing for two months, but had only become very ill the last week. His skin was cold and clammy. He had commenced to expectorate large amounts of a brown and extremely fetid fluid.

The respiratory movements were impaired, and the vocal fremitus was increased throughout the right side. Percussion over the upper lobe in front elicited a tympanic, low-pitched resonance at the apex; farther down and towards the axilla the note became higher pitched, but more metallic. Complete dulness was developed over the whole right lung posteriorly. Auscultation revealed a loud, harsh inspiratory sound, with a prolonged expiration at the apex. Towards the axilla the sounds became fainter, until they were absolutely lost in the axillary line. Here they were substituted by a crackling, which sounded sometimes like a large moist râle, at others like a friction-sound; it had at the time no cavernous or metallic echo. Dr. G. imagined that there was very little if any air moving in and out of this cavity at the time of his examination. Posteriorly there was well-marked bronchial breathing. The left lung gave evidences of vicarious function throughout.

Not finding any evidences of chronic disease of the lungs, he thought that the breaking down of the pulmonary tissue must have been acute,—either abscess or gangrene of the lung.

The diagnosis of the physical condition—viz., a large cavity near the anterior surface, surrounded above by lung-tissue pervious to air, and below by consolidated tissue—was confirmed by the autopsy. On the 3d, morning temperature 97½°, pulse 90; evening temperature 99½°, pulse 96. On the 4th, morning temperature 99½°, pulse 99, respiration 36; evening temperature 100°. On the 5th, morning temperature 97°, pulse 136, respiration 60; evening temperature 98½°. At the time of death, 8 P.M., the temperature was 96½°.

Autopsy.—The subject was a very muscular and well-nourished negro. The upper lobe of the right lung was firmly adherent to the chest-walls. The lower lobe was separated from them by a small quantity of fluid. The diaphragmatic pleuræ were adherent. The left lung was simply congested and œdematous, almost to the extent of splenization. The right lung presented in the upper half of the superior lobe, and towards the antero-lateral surface, a large cavity occupying about one-half the volume of the lobe. Its walls presented excavations in different directions, and they were lined in some places with a smooth membrane; at others, ragged pieces were seen floating from the surface. Evidently the extension of the necrobiotic process had been arrested in some places, though the cavity still contained a considerable amount of the brownish fluid that he expectorated.

so freely. The apex of the right lung was still pervious to air; but around the cavity and elsewhere through the lobe the tissue was in a condition of purulent infiltration, readily breaking down under the finger. The lower lobe was in the stage of red hepatization. Nowhere was there any evidence of chronic inflammatory change of the pulmonary tissue, or of deposit of caseous matter.

The specimen answers very closely to the descriptions given by authors, both of gangrene and abscess after the process of destruction is arrested. Dr. G. left it with the Society to decide whether he was right in entirely rejecting any chronic element from the process of destruction in the present case.

The PRESIDENT said the patient was in his wards at the Philadelphia Hospital, but that, on account of unavoidable absence extending over a few days, he did not have an opportunity to examine him. But he thought from the description of the lesions that at least we must admit two separate stages of disease, or perhaps two diseases which had originated at different periods. He thought it scarcely possible that the acute inflammatory condition of the lower lobe, and the lower portion of the upper lobe surrounding the abscess, could be of the same date as that part of the disease which had led to the production of the anfractuous cavity with smooth lining membrane. The President remarked that an abscess (cavity?) in the lung could exist for some time, and that the lung could be attacked by an acute destructive process leading to gangrene and purulent infiltration of the tissue surrounding the cavity; that this was a more reasonable supposition than one which explained the condition by a single process which should have passed so rapidly through acute inflammation to acute gangrene of the lung, while the appearances of the cavity and the adhesions of the upper lobe to the pleura would suggest some morbid action of long standing.

Dr. GUIÉRAS said there was no disease whatever of the opposite apex, and he had never seen a case in which chronic disease had advanced so far on one side without being attended by some disease of the other lung. Further, the patient was what might be called a typically-healthy and remarkably well-developed negro, so far as the external evidences of health were concerned.

The PRESIDENT replied that the points raised are those which give to the case its unusual interest, and perhaps render uncertain the exact determination of the stages of development of the lesion. It is to be regretted that there had been no opportunity for previous examination of the lung. It is to be remembered, however, that it is not uncommon to see cases of chronic cavity in one lung, the subjects of which are in apparently good condition (though liable to intercurrent disease, or sudden outbreak of tuberculous deposition), and that in such cases it is not rare for the disease to be limited to one apex for a long time.

Tubercular laryngitis.

Dr. BERTOLET presented three specimens of tubercular laryngitis, which will be found reported in another column in the current number of the *Times*.

Dilated heart; pleuritic effusion in a patient who had yellow fever two years previous to death.

Dr. JOHN H. PACKARD read the following history of the case:

"Mr. R., æt. 63, first came under my care in October, 1874, on account of asthmatic trouble, with rapid, enfeebled, and irregular action of the heart. He had never been in perfectly good health since an attack of yellow fever, according to his statement a very severe one, which he had had, some two or three years ago, when in Mobile. Some years before that he had had

some form of ophthalmia, by which, or, in his opinion, by the severe treatment adopted, the sight of both his eyes had been totally lost.

"The symptoms above mentioned were in a great degree relieved by the use of tonics and digitalis; but in February they recurred, and proved less amenable to treatment. On the 1st of March he was attacked with congestion of the lungs and hæmoptysis. The right lung was more seriously affected than the left. This congestion passed off entirely within a week, but the marked debility which had attended it remained, and steadily increased until his death, March 31.

"During the continuance of this congestion, and to some degree after it had subsided, there was dulness on percussion over the right back, and the liver could be plainly felt extending below the ribs, its surface being nodulated. The urine was albuminous, but not highly so. A week or more before his death, an anasarca condition of the legs, which had been gradually increasing, suddenly became very marked; and during the last three days of his life gangrene began in the columna and tip of the nose.

"An autopsy was made, thirty hours after death, by Dr. John M. Keating. Body in ice; rigor mortis scarcely perceptible.

"In opening the thorax, the cartilages of the ribs were found very firmly ossified, so that they had to be sawn through. A large effusion of serum existed in the right pleura, perfectly limpid except in the neighborhood of an old adhesion posteriorly, where there was a long ragged flake of lymph. The lung was somewhat emphysematous above and in front, but below and posteriorly there was a focus of very marked congestion, a portion of the tissue sinking in water. In the left lung the same appearances existed, except that the congestion was less marked and seemed to be merely hypostatic. There was no effusion in the left pleura.

"The heart was very largely dilated, its tissue far advanced in fatty degeneration, its valves all healthy, as were also the large vessels. The auricles and ventricles were full of blood, liquid in the right cavities, softly clotted in the left.

"In the abdomen there was found a good deal of fat in the subperitoneal areolar tissue, extending along the suspensory ligament of the liver, which organ was roughened or finely nodulated on the surface, and seemed to be fatty. A curious arrangement of the gall-bladder was noticed; it was very long, full of fluid bile, and curled up around the anterior edge of the liver, so as to have its fundus directed towards the diaphragm.

"The omentum was strongly adherent to the underlying viscera, and numerous adhesions and slight deposits of lymph existed between the coils of intestine. Nothing abnormal was noticed in the condition of the alimentary canal. The pancreas was somewhat bulky, but not perceptibly diseased.

"The spleen was rather a small one, very firm, and of a dark plum-color on section.

"The kidneys were not enlarged, perhaps somewhat contracted; their surfaces were lobulated, and the section seemed to the naked eye to indicate cirrhosis.

"Portions of the spleen, liver, and kidneys were submitted to Dr. R. M. Bertolet for microscopical examination.

"The question as to the agency of the attack of yellow fever in inducing the pathological changes above recorded is one upon which those more accustomed to the study of purely medical disorders may be able to pronounce a ready judgment; to my own mind, the history the patient was able to give me seemed too vague and incomplete to permit me to do so.

"The chain of morbid conditions leading to death in this case seemed to be as follows: the dilated and fatty heart was of inadequate power to drive the blood

against the disadvantage of imperfect aeration in the emphysematous lung; upon the occurrence of congestion of the lung from a casual chilling of the cutaneous surface, the sluggish circulation aggravated it, and gave rise to dropsical effusion into the right pleural cavity, this being the side on which, from the position of his bed, he habitually lay; this condition mechanically hampered the action of the lung, and further embarrassed the weak heart, promoting the occurrence of slight ascites and anasarca; all these circumstances, with the imperfectly performed functions of the liver and kidneys, constituting a total of depression under which the muscular tissues of the heart failed altogether."

Dr. R. M. BERTOLET had made an examination of a small section of the heart, and found in a marked degree the fatty degeneration of its muscular structure. The cirrhosis of the liver and kidney had not yet reached the latter stages, but was present, as evidenced by a hypertrophy of the connective tissue about the blood-vessels, the Malpighian capsules, and the membrane of the tubules.

The PRESIDENT said the extent to which the liver and even the kidneys are implicated in yellow fever makes the condition of these organs, in cases where recovery has taken place, an interesting one. He thought that the characters of the disease were such that they need not lead necessarily to cirrhosis of these organs; while the frequent existence of emphysema of the lungs, fatty degeneration of the heart, and cirrhosis of the kidneys in cases where no yellow fever is previously present makes the question a very obscure one. He asked Dr. Bertolet whether he was aware of any facts bearing on the question of the liability of the kidneys and liver to organic disease subsequent to recovery from yellow fever.

Dr. BERTOLET replied that he had never had the opportunity of making a post-mortem examination in a case of yellow fever, and, although much had been written upon the subject, he felt that the pathology of the disease was still ill determined. He thought the condition of the liver and kidneys ordinarily met with in yellow fever by no means necessitated, and it was doubtful if they even favored, the development of cirrhosis in these organs. Fatty infiltration of a glandular tissue did not necessarily imply its destruction, nor is the atrophic liver always a resultant of a sclerotic process or so-called cirrhosis. Should we admit the occurrence of cirrhosis as a sequel of yellow fever, we must first carefully exclude all other causes of the same state, as alcohol, intermittent and other fevers, before we could be certain it was produced by yellow fever.

Intestinal obstruction caused by huge thrombus resulting from rupture of the abdominal aorta.

The PRESIDENT made a communication relative to a case of *intestinal obstruction* from an unusual cause. The patient was an old man, aged 82, who had long suffered with a right inguinal hernia. For some time before his last illness he complained of pain in that region. When seen first by Dr. M. Woods, his attending physician, he was complaining of considerable abdominal uneasiness, and there was obstinate constipation. This continued despite the use of large enemata and full doses of powerful cathartics. When first seen in consultation, there had been no fecal evacuation for at least ten days. There was frequent hiccough, but no actual vomiting. There had been, however, very little food taken during that time. The patient was delirious, and difficult to restrain. The pulse was frequent and small; the radial arteries very atheromatous. There was no hernia detectable in either groin. The abdomen was distended, and the walls enormously fatty, so that careful palpation was impossible. The amount of urine secreted was difficult to estimate, as it was passed in the bed. Digi-

tal examination of the rectum showed that this part of the bowel was clear. Attempts were made to give large injections by a syringe, which was found impossible. By employing hydrostatic pressure (gained by pouring water from a height of about six feet above the body through a flexible tube furnished with an olive-shaped end) about one and a half pints of water were forced into the bowel; when this escaped, it brought several pieces of hardened feces. It was again attempted, but it was impossible to make the bowel contain as much the second time, and no result was obtained. The diagnosis, therefore, was readily arrived at, notwithstanding the complication of the case with an old hernia, that there was some increasing obstruction low down in the bowel, and probably in the sigmoid flexure of the colon.

Death ensued forty-eight hours later, from exhaustion. At no time had the obstruction been so complete as to prevent the passage of some flatus.

At the post-mortem examination the right inguinal canal was found much dilated, but containing no hernia. The cause of obstruction was sought by following the intestines downwards from the stomach. There was no trouble in the course of the small intestine, which was, however, very unequally distended, some parts being very full, others almost empty, small, and compressed-looking. On reaching the descending colon, it was found to be strongly adherent to and much compressed by a large mass which occupied the left lumbar region. This mass was about nine inches long, four and a half inches wide, and three inches thick. On incision, it was found to be an enormous clot of blood, evidently of some duration, being blackish, firm, and infiltrating the fatty and cellular tissues of the part. The aorta was imbedded in this clot, and on discovering and laying open this vessel its walls were found in a state of such intense atheromatous degeneration that they had given way, and several ruptures had occurred in the inner and middle coats of the vessel. The huge clot above described was, therefore, in part a dissecting aneurism, and in part depended on the escape of blood through the adventitia infiltrating the surrounding cellular tissue. No distinct aneurismal sac could be detected. The obstruction of the intestine was entirely due to the pressure of this mass, and was most marked low down in the sigmoid flexure of the colon, thus agreeing closely with the seat as determined by previous examination.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON DISEASES OF THE EYE. By HAYNES WALTON, F.R.C.S., Surgeon to St. Mary's Hospital, Surgeon-in-Charge of the Ophthalmic Department of the same, Lecturer on Ophthalmology, etc., etc. Third Edition, Re-written and Enlarged. In one large octavo vol., 1188 pages.

In commencing for critical review a book just entering upon its third edition, re-written and enlarged, which had been in its former editions "most favorably reviewed by some of the highest authorities in Great Britain, including a most extended, elaborate, and valuable one by Dr. Mackenzie, of Glasgow," one does so anticipating the pleasant duty of little else but favorable comment on its merits. At the very threshold, however, these anticipations are marred. In the otherwise fine plate representing a horizontal section of the eyeball (spoken of as vertical under the plate), the iris is represented as hanging free between the anterior and posterior chambers. It is now so well known that the iris is in contact with, and finds support for its pupillary margin on, the anterior capsule of the lens, that there seems no excuse for propagating an error like this by

pictorial representation. We are not told whether the plate is from an original drawing. We infer not, although no mention is made of its source, from the fact that the author distinctly states on page 809 that the "iris is in contact with the lens in the natural state."

After the table of contents, etc., we are greeted with an anatomical introduction of twelve pages, too short for the student of the anatomy of the eye, and not sufficiently minute to claim the attention of the ophthalmologist. The first four chapters are devoted to ophthalmic instruments, anæsthetics, eye-douches, and eye-shades. These general topics, which, very appropriately, begin the work, could as well have been placed in one chapter. In perusing them, we were pleased and instructed by the many practical suggestions and the terse and vigorous manner of expressing them.

The succeeding chapters from V. to XI. inclusive are respectively devoted to entozoa, diseases of the orbit, of the frontal sinus, tumors, protrusion of the eyeball, erectile and vascular tumors in association with the eye, and aneurism in connection with the eye. These chapters are exceptionally valuable, both because of the concise manner in which the author has stated his wide experience in the form of differential diagnosis, and the large number of illustrative cases he has culled from his practice. For the sake of the student, however, one cannot but think it had been better to have reserved these chapters, devoted to comparatively rare and obscure affections, until the less serious and far more frequently occurring diseases of the conjunctiva, cornea, iris, etc., had been treated.

In Chapter VI., p. 43, the author states that "*orbital cellulitis is one of the three varieties of erysipelas, the others being the cutaneous and cellulocutaneous.*" The italics are his own. He would probably have some difficulty in finding support for such statements, except in cases where the cellulitis of the orbit resulted from an extension of erysipelatous inflammation from the face or elsewhere to the orbital contents.

Chapter XII. has the somewhat euphonious title of "*Geometrical Optics.*" We cannot but regret that our author had not justified the use of this caption by a more thorough and complete treatment of optics as applied in ophthalmology.

Chapter XIII. is on the construction of spectacles.

Chapter XIV., on the ophthalmoscope. Decided preference is expressed for the ophthalmoscope of Coccius, while the far more excellent and convenient instruments of Loring and Knapp, of this country, are not even mentioned. Such a glaring omission is difficult to account for, except on the principle that no good thing can come out of Nazareth.

On p. 305, while treating of the normal aspect of the retina and optic disk, we find the statement that "little is to be seen of the *macula lutea* in the erect image," and the careful descriptions of Helmholtz, Coccius, and Liebreich are stigmatized as "*incongruous.*" Most observers would feel themselves at great loss were they not able to employ the magnified upright image in the study of pathological changes in and around the macula.

Chapter XVI. is devoted to the discussion of the paralytic affections of the eye, and is one of the most valuable chapters in the book. We regret that the space allotted us will not permit more extended notice of this satisfactory chapter, treating, as it does, of one of the most perplexing subjects to the oculist. Our author's experience corroborates that of most observers as to syphilis being the "commonest cause" of these ocular paralyses.

Chapter XVII. is upon ptosis, or falling of the upper lid. Why it should have been arbitrarily severed from its place among paralytic affections is not obvious. All operators will not agree with him as to the efficacy of

the removal of an ellipse of integument from the upper lid in overcoming the defect.

Chapter XVIII. is devoted to the consideration of the somewhat difficult subject of strabismus, which is rendered doubly confusing. After the careful study of paralytic affections of the muscles in the preceding chapter, one is surprised at being once more confronted by them under the head of strabismus. Our author has, we think, injudiciously adopted the old habit of classifying deviations of the visual axes from paralysis of antagonizing muscles with strabismus. Formerly all deviations from whatever cause were included under this term; but since the researches of Donders and Von Graefe it has come to be limited to that group of cases characterized *invariably* by the fixing of one eye upon the observed object, while the other deviates from its normal direction; the degree of movement in each being equal and normal, while all deviations depending upon paralysis or insufficiency from any cause, or mechanical obstruction to the movements of the eyeball, have been excluded and properly classified under their respective heads. It is to be regretted that in the work before us this course was not adopted. There is a wide difference between the paralytic deviations of the eyeball and true strabismus, as regards their etiology, symptoms, and treatment. Paralysis of the ocular muscles is usually but a symptom of some central or intra-cranial lesion of which it may be but a remaining evidence; while in strabismus we have to do with the eye alone. The treatment of ocular paralysis under this head has led our author into not a little confusion and conflict with accepted views of the ophthalmologist,—e.g., in speaking of the period at which the squint begins, he asserts that "from early infancy eyes may lose their parallelism and turn inwards." On p. 370 he says, "I am myself quite satisfied that squint has existed in several children who were brought to me within the month, and therefore it is not unreasonable to suppose that the statements of the mothers to the effect that the squints were observed a few days after birth were correct." The observations of Donders, verified by those of numerous subsequent observers, place the usual commencement of squint at about the fifth year, or at the time children begin the continued use of their eyes for near work. The writer has seen a number of cases of squint occurring between the third and fifth years, but never earlier than the third year. Numerous examples of deviation have fallen under his notice, occurring at a more tender age, but they have, without exception, belonged outside the category of true strabismus; depending either upon some disturbance of innervation or opacities in the refracting media.

In the etiology of strabismus convergens, our author has strayed very widely from the generally accepted views, and it is here we find the key to the confusion characterizing his chapter on strabismus. He denies that strabismus is but a symptom of hypermetropia, as put forth by Donders, taking exception entirely to the validity of his reasoning. It would lead us too far to enter into the discussion of this question with the space allotted us. It is sufficient evidence, however, of the fallacy of his position that the views of Donders have been subjected to the most careful scrutiny, and his observations everywhere confirmed by other observers. It is the very rare exception to find strabismus convergens disassociated with hypermetropia.

The following is a fair example of our author's reasoning: "In vain have I been looking for squint with hypermetropia only,—that form of faulty refraction with good power of accommodation, in which the application of lenses will enable the squinter to see minute and distant bodies. I find, as a rule, that where hypermetropia is present with squint, loss of acuteness of vision is

more frequently associated with it than not. I am, therefore, disposed to attribute the deformity more to the impairment of sight than to the hypermetropia. . . . Where, in periodic squint with hypermetropia, some loss of acuteness of vision occurs, a convex lens enables the eye to right itself, I consider that such a result is as much due to the increase of the visual angle and enlargement of the object as to the hypermetropia being neutralized."

In the treatment of strabismus by operation our author, rightly, we think, prefers to incise the conjunctiva and sub-conjunctival tissue vertically over the attachment of the muscle, and securing the tendon over a blunt hook (he prefers a curved one without a bulbous extremity), and then severing its attachment close to the sclerotica. He strongly advises the use of the conjunctival suture, as being safer and reducing to a minimum the traces of the operation. In this country operators usually omit the suture, in order to modify the effect of the operation subsequently should the muscle have attached itself too far back. The author distinctly declares, in two places in this chapter, that the degree of deviation is a matter of no importance; that, however slight or great, the muscle must be entirely divided. It is true that nothing less than its perfect division and re-attachment at a point farther back on the globe will meet the requirements of the case, but it is equally true that the extent of the retraction of the muscle is largely under control by the amount of laceration in the sub-conjunctival tissue and capsule of Tenon, so that it is obviously of importance to know whether there is a deviation of but 1''' or 4''' to correct.

The amblyopia of the deviated eye is a well-known fact. Every one conversant practically with strabismus will have seen repeatedly the eye, before the operation practically blind, within a short time recover normal sharpness. Mr. Walton declares this improvement to be immediate.

In our own experience, while the improvement has been manifest in twenty-four or forty-eight hours, it has been only after the lapse of a few weeks or, in some cases, months before the normal sharpness was regained. As might have been anticipated from his views upon the causation of strabismus convergens, he makes but small account of the correction of the hypermetropia, simply stating that any existing optical defect should be corrected, but follows immediately with the remark that relapses are due to disuse of the eye. He has had but four cases of relapse in his private practice, while he does not remember any in his "public operations." "There can be little doubt," he says, "that in many of the supposed cases of recurrence the operation has never been completely done."

In diverging strabismus he again takes exception to the explanations of Donders. On page 400 it is stated, "I do not believe that the form of the myopic eye interferes with its movements." Believing the changes are too small to impede seriously its movements in the orbit or to change the relative action of the muscles, he remarks, page 401, "I admit, in a general acceptance, the statement about the insufficiency of the rectus muscles, but it must be remembered that the word *insufficiency* is but another term for *paralysis* of these muscles, unless congenital arrest of development be admitted." It is also claimed that, as in strabismus convergens the deviation is due to other defects than to the ever-present hypermetropia, so here, it is said, the divergence is due to some other disturbance of vision in one or both eyes.

He has "always been able to trace it" to some other cause, but admits that myopia is usually associated with these states. "It is," he says, "a fact difficult to explain that the circumstances which at one time of life determine an internal squint shall at another be fol-

lowed by the outward deviation of the eyeball. . . . A child seldom acquires an outward squint, an adult seldom acquires an internal one." In the treatment of diverging strabismus his experience is again at variance with that of most others, as he obtains "better results" here than in converging strabismus. We regret that limited space compels these hasty allusions, rather than a more extended discussion of the subject.

Chapters XIX., XX., and XXI., devoted to mechanical injuries to the eye and its appendages, are valuable, and represent the book and its author in the best light, for it is in these purely surgical aspects of the subject alone that his book will be regarded as valuable or a safe guide to the student. Of the succeeding six chapters there is but little to say, save in commendation. We thought more stress should have been laid upon sympathetic inflammation as the sequel to foreign bodies within the eye, and that for some reasons it had been better to defer the subject of artificial pupil, treated at great length in Chapter XXVI., until iritis had been studied, it being the most frequent cause of those conditions making an artificial pupil necessary.

Chapter XXVIII. is devoted to the anomalies of refraction and accommodation, which he has treated in sixty-nine pages. He has given a fair outline of this important subject; but from it alone, no one, even from the most careful study, would be prepared to correct these anomalies.

In the extraction of cataract, our author prefers the flap operation. In alluding to the peripheric linear operation of Graefe, he says it has many admirers, especially among his *personal friends*. He claims, contrary to the opinion of most operators, that it is less difficult of execution than the flap extraction, and, with a characteristic *Britonism*, insinuates the belief that its popularity is mainly due to this fact. He very justly condemns the now antiquated and dangerous operation of reclinacion or depression of cataract. The remaining portion of the book is taken up in the consideration of the more common defects, as diseases of the external and internal tunics of the eyeball, diseases of the optic nerve, etc. There are many points here we would desire to notice, but the limits allotted us in this review have already been exceeded. While there is so much that is good in the book, we cannot overlook its defects. In so far as it is a statement of the author's wide experience in the treatment of the purely surgical parts of his subject, the book is a valuable one; but we predict for other parts of the work a cool reception from ophthalmologists in this country. For the student it cannot compare favorably with the work of Soelberg Wells, already in the market.

S. D. RISLEY.

SELECTIONS.

EARLY HISTORY OF THE INJECTION OF MEDICINES INTO THE BLOOD.—Immediately after the discovery of the circulation of the blood by Harvey, Wren, who was then at Oxford, injected certain fluids into the veins of animals. In a letter to Sir William Petty, he states that he made the first experiment in 1656. He injected wine and ale into the vein of a dog until it became drunk, but soon after it voided them by urine. He also tried the effects of opium, scammony, and other drugs. The opium, says Oldenbrugh (Phil. Trans., 1665), stupefied but did not kill the dog. The crocus metallorum injected into the vein of another dog caused vomiting and death.

In 1667, Professor Fracassati, of Pisa, injected diluted aquafortis into the crural vein; the animal died presently,—all the blood coagulated; spirits of vitriol acted

similarly; oil of tartar, when injected, caused much suffering and great distention of the body. When opened, the blood was found fluid.

The French laid claim to the discovery in their "Medical Journals" in 1667, for a reason that one Robert de Gabets discoursed of it ten years before.

The credit of being the first to inject medicines into the human system seems to be due to Dr. Fabritius. The paper is entitled "Some new Experiments of Injection medicated Liquors into veins, together with (an account of) considerable Cures performed thereby. Communicated by Dr. Fabritius, of Dantzick. (Translated by Mr. Oldenbrugh from the original Latin)."

"As we had a great desire to try what would be the effect of the surgical experiments of injection liquors into veins, three fit subjects presenting themselves in our hospital, we thought good to make the trial upon them. But seeing little ground to hope for a manifest operation from merely altering medicines, we thought the experiment would be more convenient and conspicuous from laxatives; which made us inject by a syphon about two drams of such a kind of physic into the median vein of the right arm. The patients were these: One was a lusty robust soldier dangerously infected with the venereal disease, and suffering grievous exostoses of the bones in his arms. He, when the purgative liquor was infused into him, complained of great pains in his elbows, and the little valves of his arm swelled so visibly that it was necessary by a gentle compression of one's fingers to stroke up that swelling towards the patient's shoulders. About four hours after it began to work, not very troublesomely; and so it did the next day, insomuch that the man had five good stools after it. Without any other remedies, those protuberances were gone, nor are there any traces left of the above-mentioned disease.

"The two other trials were made upon the other sex. A married woman of 35, and a servant maid of 20 years of age, had been both of them from their birth very grievously afflicted with epileptic fits, so that there were little hopes left to cure them. They both underwent this operation, and there was injected into their veins a laxative rosin, dissolved in an anti-epileptic spirit. The first of these had gentle stools some hours after the injection, the next day the fits recurred now and then, but much milder, and are since altogether vanished. As for the other—viz., the maid, she went the same day to stool four times, and several times the next; but by going into the air, taking cold, and being careless in her food, she died.

"It is remarkable that all three vomited soon after the injection, and that excessively and frequently."—*Melbourne Medical Record*.

GLEANINGS FROM OUR EXCHANGES.

ANTISEPTIC OSTEOTOMY (*Edinburgh Medical Journal*, March, 1875).—Two years ago Professor Richard Volkmann, of Halle, introduced into his clinique the employment of the antiseptic method, and he now bears witness to the remarkable influence it has had upon the results of his operations, particularly in cases of osteotomy which are somewhat similar to artificially produced compound fractures.

He says, "The justification of operations like these undoubtedly depends entirely on the possibility of guaranteeing a successful termination. We believe that we are not assuming too much in saying that we have by degrees attained sufficient practice and experience in the antiseptic treatment of wounds, to be really able to promise such a result with certainty."

During 1874 he performed osteotomy thirteen times;

of these cases ten recovered without any suppuration at all, and the others with only the most trifling possible amount. In all the local reaction was absolutely *nil*, and in no case did the slightest redness or swelling of the soft parts take place, to say nothing of any phlegmonous inflammation.

Since the introduction of the antiseptic method, no single patient suffering from a compound fracture, in which conservative treatment was attempted, has died. These were thirty-one in number, and among them as many as nineteen compound fractures of the leg, in several instances much comminuted, and often complicated with most severe bruising and laceration of joints. Although he was working in an old and over-crowded hospital, offering the most unfavorable hygienic conditions, yet no case of pyæmia had occurred for a year and a half, although during that period about sixty major amputations had taken place.

This communication of Professor Volkmann's is of the greatest practical and scientific importance, and should be extensively noticed. The *Lancet* remarks editorially, after giving an abstract of the paper, "Such results as these deserve the widest publicity,—for criticism if they can be challenged in any way, for imitation if they cannot."

PULSATING TUMOR OF THE LEFT ORBIT, FOLLOWING FRACTURE OF THE BASE OF THE SKULL, AND CURED BY LIGATION OF THE LEFT COMMON CAROTID ARTERY (*The Lancet*, April 3, 1875).—At a recent meeting of the Royal Medical and Chirurgical Society, Mr. Walter Rivington read a lengthy paper, in which he discussed the questions of diagnosis and treatment of intra-orbital aneurism. He related the following case:

W. C., aged twenty-four, was admitted into the London Hospital in July, 1873, with a fracture of the skull. Six weeks later the patient heard a noise in his head like wind blowing, the eye gradually became prominent, pulsation of the eyeball was seen for a day or two, followed by the formation of a pulsating and thrilling tumor between the eye and the margin of the orbit. There was a bruit continuous with reinforcements, and the "bruit de piaulement" could be heard at intervals. At the time of the commencement of the aneurismal symptoms, digital compression was carried out very thoroughly, without making any impression on the disease. Ligation of the carotid was discussed, but negatived at a consultation. A further trial of compression, digital, instrumental, and direct, having been made without effect, combined with veratrum, and the affection at the end of a year being decidedly aggravated, threatening extinction of vision and preventing work, an injection of five drops of a neutral watery solution of the perchloride was made; but this proving to be insufficient in quantity to cause sufficient coagulation in the dilated ophthalmic vein, and a second injection being impracticable on account of subsequent swelling, the carotid artery was tied by Mr. Rivington. This effected a cure of the disease, a slight bruit only remaining; but superficial ulceration of the cornea occurred a few days after ligation, and resulted in opacity.

The conclusions as to treatment of such cases were:—
1. Belladonna, digitalis, veratrum, and ice were worthy of a trial. 2. Digital compression should always be essayed. 3. Instrumental compression was more difficult, and more likely to injure important nerves. 4. Galvano-puncture was not well suited for application to a thin-walled vein. 5. Coagulating fluids were adapted only for cases of arterio-venous aneurisms. 6. Ligation of the carotid was the remedy most generally applicable, but should not be hastily employed.

SUCCESSFUL SERIES OF OPERATIONS FOR STONE IN THE ADULT (*The Lancet*, April 3, 1875).—Sir Henry

Thompson, after briefly alluding to a series of stone-operations performed by Martineau of Norwich, and said to be the most successful on record, gives the following *résumé* of the results of his last one hundred operations:

"My present one hundred cases commenced shortly before Christmas, 1872, and includes every one operated on by myself up to the present time; it consequently represents my entire work of the last two years and a quarter. It may be worth while naming, in order to show that I have not carefully selected the term, that it commences just before the death of the late Emperor Napoleon, which is the third case of the series.

"Ninety-six were adult males, four were adult females.

"Of the ninety-six males, eighty-seven were operated on by lithotripsy and nine by lateral lithotomy.

"The mean age of the eighty-seven operated on by lithotripsy is 63½ years, the oldest being 83, the youngest 22, but only four were below 50 years.

"The mean age of the nine operated on by lithotomy was 63½ years also, their respective ages being 36, 59, 59, 61, 63, 70, 75, and 79.*

"Among the eighty-seven operated on by lithotripsy were four deaths: the ages were 61, 65, 66, and 81.

"Among the nine operated on by lithotomy were two deaths,—viz., at 61 and 63.

"Thus it will be seen that there was a total of six deaths in ninety-six patients, with a mean age of 63½, by the two operations.

"While alluding to what has been termed a run of successful cases in practice, I may observe that in this one hundred of mine there was one more remarkable than I have ever before witnessed or heard of. I had a succession of fifty-one elderly adult cases without a single death. They occurred between July, 1873, and June, 1874. These fifty-one cases (seven more than Martineau's entire adult series of all ages) had a mean age of 64 years.

"I wish to present this brief *résumé* as a fair example of what careful selection of the two operations is now capable of accomplishing for calculous patients. It is a little better than my entire average, including all my earliest experiences. What that is I hope soon to give to the profession in a complete form. I hope then to have the opportunity of recording all that I have been able to glean from an unbroken series of five hundred cases in the adult male, besides the cases of women and children."

TESTING FOR QUININE IN URINE.—The urine to be tested is rendered alkaline with ammonia, then shaken with ether, which dissolves out the quinine; the ether is poured off, a drop of hydrochloric acid is added and the ether evaporated. The minute residue is taken up in chlorine-water, and on adding ammonia the characteristic green color appears.

MISCELLANY.

FECUNDITY OF THE SHARK.—The *Union Médicale* of February 20 contained an account of a female of this species, caught by M. Lesseps, which on dissection was found to contain twelve living young ones. This viviparous character of the shark is confirmed by Dr. Moinet, an ex-naval surgeon, in a letter published in the *Union Médicale* of April 29. In it he relates that, when off the Antilles, an enormous blue shark was taken, which when

* Only eight given.

opened was found to contain seventy very lively young ones, which, when thrown into a tub of sea-water, swam about with great vivacity. In order to avoid any chance of being devoured at a later period by these interesting orphans, Dr. Moinet thought it advisable to cut short their career in a bath of boiling water. The small sharks varied from about nine to ten inches.—*London Medical Record*.

WEST VIRGINIA STATE MEDICAL SOCIETY.—The West Virginia Medical Society at their meeting at Point Pleasant, June 2, 1875, delegated Dr. W. H. Vankirk to represent their Society at the meeting of the Pennsylvania State Medical Society. The following officers were elected: *President*, Dr. A. R. Parbee, Point Pleasant; *First Vice-President*, Dr. J. O. Wall, Huntingdon; *Second Vice-President*, Dr. S. G. Shaw, Point Pleasant; *Third Vice-President*, Dr. B. F. Hoyt, Ravenswood; *Secretary*, Dr. W. M. Dent, Newburg; *Treasurer*, Dr. J. C. Hupp, Wheeling; *Censors*, Drs. Hildreth, Charter, Carpenter, Pipes, Hall, L. F. Campbell, and Bond.

The next meeting is to be held at Wheeling on the first Wednesday of June, 1876.

UNDER the title of "Two Thousand Years After; or, Talks in a Graveyard," Dr. James E. Garretson has essayed to write a continuation of Plato's world-famous discourse on the immortality of the soul, the "Phædo." The position is taken that soul is not a necessity of the human organism, and that a man may be born, may live, and may die, without being possessed of an immortal principle. Claxton, Remsen & Haffelfinger are the publishers.

DEAD HORSE.—The horse-shambles of Paris supplied the public during the third quarter of 1874 with nearly 630,000 pounds of meat, the result of the slaughter of 1555 horses, mules, and asses.

THE blue, roughened poison-bottle, so much discussed some years since in this city, has at last reached the hub of the universe. See *Boston Medical and Surgical Journal*, June 10.

It is reported that out of six thousand men sent out by the Dutch Government against the Achinese in Sumatra, no less than one thousand have died since December last from cholera and other diseases.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 8, 1875, TO JUNE 14, 1875, INCLUSIVE.

BACHE, DALLAS, SURGEON.—Granted leave of absence for two months. S. O. 114, Military Division of the Atlantic, June 7, 1875.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Canby, W. T., relieving Assistant-Surgeon Brooke, and upon assignment of another medical officer to duty there, to rejoin his proper station, Fort Vancouver, W. T. S. O. 69, Department of the Columbia, May 27, 1875.

DELANY, ALFRED, ASSISTANT-SURGEON.—Granted leave of absence for three months on surgeon's certificate of disability. S. O. 116, A. G. O., June 11, 1875.

STEINMETZ, W. R., ASSISTANT-SURGEON.—Assigned to duty at Cheyenne and Arapahoe Agency, Indian Territory. S. O. 91, Department of the Missouri, June 8, 1875.

MUNN, C. E., ASSISTANT-SURGEON.—Assigned to duty at Camp Robinson, Nebraska. S. O. 67, Department of the Platte, June 4, 1875.

SATURDAY, JUNE 26, 1875.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE USE OF ADHESIVE PLASTER IN FRACTURE OF THE PATELLA.

BY JOHN NEILL, A.M., M.D.,

Clinical Professor of Surgery in the University of Pennsylvania.

YOU have had this winter an opportunity at previous lectures of witnessing fractures of every bone in the body with the exception of the patella.

In all of these, force has been either directly or indirectly applied. You have seen bones of the arm and leg broken by direct force at the point of its application; and you have seen a fracture of the orbital plate of the frontal bone from a fall upon the back of the head, as well as a clavicle broken by a fall upon the hand where the force has not been directly applied.

But you have not seen a fracture where muscular contraction plays so important a part as in the one before us. The muscular action may be voluntary or involuntary. Gymnasts and rope-dancers break their limbs by violent exertion. I have seen a patient who had fractured his humerus by throwing a stone. The patella, however, is sometimes fractured by no extreme effort, by no unusual exertion. I saw a gentleman a few days since who fractured his patella by merely stepping from a sidewalk to the street. I also treated a patient in the Pennsylvania Hospital whose patella was fractured by a small stick, not ten inches long, striking his knee whilst riding on his dray after the manner of draymen. In such cases the muscular contraction is *involuntary*. You can readily demonstrate this contraction of the quadriceps extensor, and especially of the rectus femoris, in your own person. If you place one knee over the other, and allow the leg to hang loosely, and then forcibly strike the top of the knee with a book, the leg will immediately be extended. It is this involuntary reflex muscular action which causes fractures of the patella to occur from such apparently trivial causes. Alighting on an irregular piece of ground, the attempt to save oneself may produce such a fracture. Of course the patella may be broken by a direct blow, a bullet, or by machinery, but such are generally compound fractures. In simple transverse fractures of the patella the force is always more or less the result of involuntary muscular contraction.

I will not enter into the discussion between the English surgeons who formerly stated that the force was *always* immediate and direct, and the French surgeons who declared that every fracture of the patella was the result of involuntary muscular action; but by experimenting for yourselves in the dissecting-room you will have difficulty in producing this fracture unless you use some instrument, such as a hatchet.

Now, in this hearty, hale young man, the acci-

dent occurred two days ago. He was wrestling with a friend, and, as he was going under, his knee touched the ground, and he suddenly became completely disabled, fell, and was unable to walk.

There is some swelling, but, as I press my fingers between the fragments, you can easily see the interstice. This is not a trifling injury, though he seems to suffer no pain or inconvenience as he lies in bed; but unless he is properly treated he will not only be lame for life, but his locomotion will be seriously interfered with, especially in going up-stairs.

At the same time, understand that bony union will hardly take place. So rarely do the fragments unite by bone that some surgeons doubt whether there ever was a bony union. Many specimens which have been supposed to be united by bone have not stood the test of being boiled and sawed in sections. I never saw but one perfect specimen, which, I am sorry to say, I have either mislaid, lost, or loaned. I hope it will some day re-appear. The specimen was well boiled, and the interstice found to be completely filled up with new bone, increasing the longitudinal measurement at least one-third.

In the living subject one often thinks that the union is bony because we cannot move one fragment upon the other, and the patient thinks so too. A man stopped me in the street a few days ago, and, finding that I did not recognize him, said, "You will know me by my knee: I have a bony union which you treated at the college on Ninth Street." I recalled his case, and examined his knee, and could feel no separation of fragments.

But the great point to secure, if not a bony union, is a ligamentous union as short as possible by the simplest and safest means.

I cannot even mention in a clinical lecture the names of all the machines used to accomplish this end. I will simply say that some are useless, others dangerous, while many, especially those which act on the principle of a figure-of-eight bandage, are very useful.

Let me first say that I have had the patient placed upon a fracture-bed; that the limb is to be extended and elevated, and the fragments coaptated. The method of retention which I prefer is not altogether a new treatment, for I brought it to the notice of the medical profession in a paper published in the *Medical Examiner* of January, 1854, giving cases so treated by me at the Pennsylvania Hospital.

The dressing is often alluded to by writers and teachers in a general manner, but the mode in which I apply it differs somewhat from that described in my paper.

The apparatus consists merely of a back-splint, strips of adhesive plaster three-fourths of a yard long and one inch wide, and two or three rollers.

The back-splint should be made of half-inch plank, and should reach from the middle of the thigh to the middle of the leg, at the same time corresponding to the thickness of the limb. It should be padded on its upper surface in the middle, to fill up very fully the popliteal hollow. After it is applied to the back of the knee it can be retained at first

by a strap or two circularly applied at each extremity. Then the accurate coaptation of the fragments is to be effected by applying the middle of the loop of a plaster-strip immediately below the lower fragment, and, drawing the extremities upward and obliquely, fastening them to the under surface of the splint. The wooden surface secures a firm adhesion, much more so than if the ends of the strips were fastened to the skin. After the lower fragment is fixed, the upper can be approximated to it in the same manner by loops successively applied, and the extremities drawn very obliquely to the lower and under surface of the splint. Then a roller is to be applied from the foot upwards, extending beyond the middle of the thigh so as to compress the muscles and prevent the extensor from contracting. Now we will place the limb upon an inclined plane, and elevate it as much as possible, so as to approximate the origin and insertion of the rectus muscle. In a few days this swelling will subside and the dressings be re-applied, and thus the fragments can be still more closely approximated, and the probability of a short ligament considerably enhanced.

Thus the patient is to lie for at least six weeks, although the posture can be changed and still the same effect be produced by raising him to a sitting posture whilst lowering his limb. Six weeks more will be required to render the union sufficiently firm to be used. It is from a disregard of this knowledge—that it takes as long a time to mend a patella as it does to mend a fractured thigh—that unsatisfactory results are so often obtained. And, although the limb be kept extended and fixed for three months, ankylosis will not occur; but some stiffness will remain for a long time, and frictions and partial flexions will have to be constantly maintained until the gradual use of the limb is secured.

By these means this man will have a useful limb, and if the ligament is one-third, one-half, or even three-fourths of an inch in length, he will walk perfectly well; if it is longer than this he will experience some difficulty in going up-stairs.

ORIGINAL COMMUNICATIONS.

OLD AND NEW DOGMATISM.

BY HENRY HARTSHORNE, M.D.

I HAVE read with much interest, in the *Philadelphia Medical Times*, two papers by Dr. B. Lee, referring to croup and diphtheria. Upon some portions of the second (June 5, 1875), entitled "The Moloch of Tradition," I desire to comment briefly.

The question of the identity or non-identity in nature of all serious cases of "acute faucial,"* laryngeal, and tracheal disease is very important in pathology; it is important, practically, at least, to those whose therapeutics do not limit them to the employment of "antizymotics and tonics, and the avoidance of all depressant measures," in certain cases of what not only tradition, but careful obser-

vation also, shows to have the character of inflammatory disease.

Without leisure to argue this question at length, I would suggest that, to use Dr. Lee's figure, there are some iron-clads which can resist even "heavy ordnance." While my own convictions on the subject have been chiefly formed by the study of cases in practice, sufficient in number to afford ample material for an individual conclusion, we will not need to look far to find examples of authority, recent, and, in a safe sense, "progressive," to set against that of the distinguished English physician cited by Dr. Lee. Such examples are those of Niemeyer (though deceased, still influential), Oppolzer, Letzerich, C. West, Flint, Lewis Smith, and Fordyce Barker. All of these have maintained distinctly the specific nature of diphtheria, as another affection from acute non-specific laryngo-tracheal inflammation, with or without pseudo-membrane; the existence of membrane in the greatest number of fatal cases, the last of which is, however (not a tradition, but), a long-established fact. I know of no better evidence sustaining the distinct existence of these two diseases than that presented by some statistics quoted in the work of Meigs and Pepper; especially satisfactory, because, in that work, the identity of all cases of membranous croup with diphtheria is maintained. The statistical facts to which I thus refer are these: in the mortality lists of Philadelphia, diphtheria does not appear before 1860; while croup had occupied a place of importance from time immemorial. In 1860, diphtheria was credited with the large number of 307 deaths. If a mere change of nomenclature or diagnosis had taken place, these deaths would simply have substituted in the lists those from croup. But, instead of this, the number of deaths reported from croup was in this and the succeeding years somewhat (though not largely) greater than before. The figures were as follows:

	Croup.	Diphtheria.
1855 . . .	265	
1856 . . .	268	
1857 . . .	256	
1858 . . .	292	
1859 . . .	312	
1860 . . .	354	307
1861 . . .	304	502
1862 . . .	258	325
1863 . . .	444	434
1864 . . .	455	357

Thus, the whole number of deaths by croup from 1860 to 1864 inclusive was 422 more than during the previous five years. This was no greater increase than might be expected from the continuous increase of population. But, during the time from 1860 to 1864, the deaths from diphtheria in addition to those from croup amounted to 1925.

It appears to me impossible for any one engaged in practice in Philadelphia during the period named, from 1855 to 1864, not to have observed that a new disease was introduced among us. Croup we had known always; its false membrane had not only been figured in all the books and preserved in pathological collections, but it had been met with in our patients. But diphtheria, although no doubt

* Dr. B. Lee's expression.

described in some (at that time) almost forgotten medical histories of previous epidemics at home and abroad, was yet, then, with us new. I remember to have obtained the aid, in consultation, of the late Dr. William Pepper, in the treatment of the first case of diphtheria which he saw; it was in West Philadelphia, at a house in which four cases successively occurred, two being fatal. Such facts impress one in a manner not to be forgotten.

Among the authorities quoted by Dr. Lee in his second article, the most eminent is Sir William Jenner. This is a change of opinion on his part; and I doubt whether all careful readers will consider that his reasons given for it are quite sufficient. He evidently is in doubt about it himself, using such words as these: "I am inclined now to this belief. . . . I say I am inclined to this belief. I am not sure that it is true," etc. This caution may be commended. My present purpose is, indeed, not more to put in a plea on behalf of a pathological opinion of whose correctness and importance I am convinced, than to protest against dogmatism, *new or old*, in matters of medical science. If there be, indeed, a "Moloch of tradition," there is also a Belial of recent authority, which may be as blindly worshipped. We have had in our age too much of a tendency to regard everything as false or "obsolete" which was known ten or twenty years ago; and everything reliable in the serious business of dealing with disease, which is "advanced" or "progressive" in its omissions or commissions. "Indiscriminate phlebotomy" (if it ever existed) is a thing of the past, which can never be revived. If there be, in the use of this phrase in the article to which I have been referring, an allusion to a vigorous address before the late session of the American Medical Association, delivered by a distinguished surgeon, the latter is not likely to be appalled by the vision conjured up of a "gory altar." Let us by all means allow literature to have its own exclusive use of such rhetorical images. The calm vision of science is not aided but clouded by their obtrusion into her sphere.

REMARKABLE CASE OF GALL-STONE.

BY J. V. SHOEMAKER, M.D.

DR. J. F. BIRD was called early in the spring of 1874 to Mrs. S., who had already passed a number of gall-stones. The characteristic pains had been experienced during the passage of these stones. Under treatment the patient became somewhat relieved, but very soon a rapid emaciation commenced, and, although the appetite was good, there was no nutrition. A large movable tumor soon appeared immediately in connection with the *liver*, which was considered by a consulting physician to be due to *cancer*.

The patient died of extreme exhaustion the 29th day of July, and at the post-mortem examination the gall-bladder was found to be perfectly impacted with gall-stones, varying in size from a small partridge-shot to a garden-pea. They numbered nine-

teen hundred and forty. There was not a single vestige of biliary secretion, even the gall-bladder itself being colorless. The duct was considerably enlarged at its hepatic extremity in consequence of the frequent passage of gall-stones through its calibre. The liver was rather diminutive in size, but not changed materially in structure or color.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF PROF. AGNEW, MAY 19.

Reported by DR. J. WILLIAM WHITE.

VARICOCELE.

CASE I.—This patient, a man *æt.* 33, has, as you see, a swelling or enlargement in his scrotum, disappearing when he lies down, and returning when he resumes the erect posture. Now, knowing these two facts about a swelling in this locality, you know that it is either a varicocele or a reducible hernia. The diagnosis between these conditions is so easily made that a mistake is simply inexcusable. Make your patient lie down, wait until the swelling has disappeared, and then place your finger firmly over the internal abdominal ring, retaining it there while he again stands up. If the disease is a hernia the swelling will not re-appear, but if it be varicocele it will speedily return, and rather more quickly than usual, because you are obstructing the spermatic veins and preventing the return of blood from the tumor. Usually, in these cases, I do not advise any operation so long as the tumor gives no special trouble and the testicle shows no disposition to atrophy. Frequent bathing with cold water, and the use of a suspensory, will generally relieve the patients of the pain and weakness in the lumbar region, the feeling of weight and dragging, and the burning sensation of which they usually complain. Sometimes, however, as in the present case, an operation is rendered necessary by the condition of the testicle, as well as for the relief of the painful symptoms. The old plan consisted in laying open a portion of the scrotum and excising the veins; another, in occluding them by pushing a pin underneath, and surrounding them with a ligature externally. This latter was very painful, as the skin was constricted by the ligature.

A much simpler way is one which I will now employ, and by which we can throw around the veins a subcutaneous loop which can be disengaged at any time. The first step is to separate the vas deferens, which feels like a piece of wire, from the other constituents of the cord. Having done this, we push it to the rear, and then put a needle through between it and the veins. We then nick the skin slightly, and enter a second needle, double-threaded, carrying it between the veins and the skin. It is then withdrawn. The loop of the thread is then passed under the end of the first needle, while the two free ends are brought down and tied lightly around the other end. We thus have the veins constricted by a loop which can be removed at any time merely by withdrawing the needle. It is usually left in position for about seven days, unless there is much fever with marked constitutional disturbance. Although varicocele sometimes returns, it has not been true in my experience that, as Mr. Symes says, it does so in all or nearly all cases. On the contrary, we may usually look forward with considerable confidence to effecting a permanent cure by this method.

ILIAC ANEURISM.

Case II.—We have here a strong, healthy-looking man, *æt.* 47, of fair constitution and good family history. He confesses to drinking freely, and we notice that he has the scar of a suppurating bubo in each groin. We also observe on feeling his pulse in the right wrist that he has a very small, atheromatous radial artery which is hardly discernible. Eighteen months ago he tripped and had a slight fall, and ever since has had obscure pains about the pelvis and right thigh, but, until about five months ago, there was no external evidence that he had sustained any injury. Then a tumor made its appearance under Poupart's ligament on the right side, and has since grown to what you see are its present dimensions. It is about four inches in diameter, and extends from the crest of the ilium to the median line. It involves the femoral below Poupart's ligament to the extent of two or two and a half inches, and the external iliac for an indeterminate distance. It has a centrifugal heaving movement, which ceases when I make firm pressure on the abdominal aorta or primitive iliac. On laying my ear over it, I can hear a thrill or bellows-sound. Compression has already been tried with an abdominal tourniquet, the pad of which thrusts the iliac artery against the brim of the pelvis. It was continued for five hours with the aid of morphia and ether, and at the time of removal there seemed to be some solidification, but the pulsation did not cease entirely, and has since returned. We propose to repeat this trial, as in such cases compression should certainly be very thoroughly employed.

Ligation of such a large vessel as the external iliac is a serious matter. We would have to go far up it, nearly to the bifurcation of the primitive iliac, and then would run the risk of not getting a firm clot and not having the artery entirely occluded. In fact, it is extremely probable that in this case we would have to ligate the common iliac, an operation which has been attended with a fearful mortality,—29 out of 39 cases having died. Iliac aneurism is of very rare occurrence compared with other forms, only 9 cases having been reported to 551 cases of aneurism of other vessels. In two of these cases the primitive iliac was tied: one died and one recovered. In four the vessel was sound enough to admit of the application of the ligature to the external iliac. All of these recovered. In one case the abdominal aorta and the distal extremity of the femoral were ligated, but this proved fatal in a few hours. In three cases compression was used, and these all recovered.

Hence, as in this case we have every reason to believe there is a diseased arterial system, and as we would probably be compelled to tie the common iliac, we will give compression an extremely thorough trial.

(This case was subsequently entirely cured by compression of the abdominal aorta with an abdominal tourniquet, and up to the present time no return of the pulsation has taken place.)

ENCEPHALOID TUMOR OF NARES AND ANTRUM.

Case III.—You will notice the peculiar physiognomy of this boy, *æt.* 8, who is suffering from encephaloid growth situated in the nasal cavity and pharynx and encroaching upon the antrum. The cheek and eye of one side are pushed out and rendered prominent; the superficial veins are conspicuous, owing to the pressure of the tumor on the deep veins; the respiration is stertorous and difficult, from the involvement of the pharynx and soft palate. This tumor has grown to its present size within a month. We will remove it with the intention of giving present relief, not with the hope of curing it permanently.

(The tumor was removed in fragments with forceps, as the base was too broad to be encircled with a loop. It was found to be encephaloid.)

TUMOR IN PAROTID REGION.

Case IV.—This patient, a female, *æt.* 25, is suffering from a swelling, which has followed a blow received eight months ago, and which has grown slowly ever since. Although it does not occupy the parotid region on the neck, it exactly conforms to it on the face, being bounded above by the zygoma, behind by the cartilage of the ear, and in front by the masseter muscle, this space corresponding to the limits of the parotid fascia. It may be that there is a low inflammation going on which will result in an abscess; but when I see a slow growth, with a sense of elasticity, occurring on the side of the face over the parotid region, I remember that that gland sometimes assumes malignant action, and am, therefore, cautious in my prognosis. In this case it cannot positively be asserted that either view is correct. We will simply order a lotion of equal parts of laudanum and iodine, and will wait.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. S. D. GROSS.

Reported by F. H. FENTON.

VARICOCELE.

C. R., *æt.* 19 years. This patient is complaining of an enlargement on the left side of the scrotum, the latter being well marked by ridges, and the testicle is felt lying at the bottom. It is simply an immense tumor: larger than any I have ever hitherto seen in one so young. This affection evidently is a varicocele. It is most common between the ages of fourteen and twenty years, though I have known it to happen as early as at the age of eleven years. I propose to ligate the enlarged and distended veins subcutaneously, first taking care to separate the vas deferens from the mass, as any injury to it would result in a wasting away of the testicle. As I grasp the tumor it feels like a mass of earth-worms, and the vas deferens gives us the sensation of a whip-cord between the fingers; and for this reason the separation from the veins is very easy. Now, having separated the vas deferens from the veins, and grasping it between my thumb and finger, I carefully pass a needle, armed with a silver ligature, behind it, directly passing through the walls of the scrotum, and bringing it out on the other side. I then compel my needle to retrace its steps, taking care to pass my instrument in front of the veins, thus making but one puncture on either side. Then, drawing my ligature through, I twist the ends of it over a perforated button. In three days I shall untwist the wire and tighten it again. The treatment will be of an antiphlogistic character. The patient will be kept in bed, on a light diet, with the scrotum suspended and kept constantly wet with cold water and also a solution of Goulard's extract and laudanum. I prefer to operate, as you observe I have done here, with the patient in the standing position.

TRANSLATIONS.

POISONING BY CHLORAL—STRYCHNIA AS AN ANTIDOTE—RECOVERY.—Dr. E. Levinstein reports the following case (*Centralbl. für Med. Wissen.*, 1875, No. 17).

A man who had taken about six drachms of chloral was found half an hour afterwards in deep sleep, but without threatening symptoms. A little later, however, tumultuous action of the heart, with difficult and interrupted respiration, set in; and later still the action of the heart became greatly enfeebled, so that, even in

the carotids, scarcely any pulse was discernible. The pupils were greatly contracted, and the temperature sank to 91.2°.

Artificial respiration, by passive movement and faradization, proving of no avail, one-twenty-second of a grain of strychnia was administered hypodermically. Convulsive movements of the muscles almost immediately ensued, and soon after trismus; the cardiac movements again became perceptible, the pupils dilated, and the temperature rose to 92°. Shortly after, the former threatening symptoms appearing once more, a second injection of strychnia, to the amount of one-thirty-second of a grain, was administered. The effect of this was similar to that of the first, the temperature rising to normal; but artificial respiration had to be kept up for eight hours. Trismus and tetanic spasm remained for fourteen hours after the second injection; but at the end of thirty-two hours the patient awoke feeling fresh and well. No gastritis followed the ingestion of the chloral, probably because the patient's stomach contained food at the time. X.

LOSS OF HORIZONTAL MOVEMENT OF THE EYES—SOFTENING OF THE CEREBELLUM.—At a recent meeting of the Société de Chirurgie (*Le Mouvement Méd.*, May 22), M. Parras stated that lesions of the cerebellum might influence the associated movements of the two eyes, reading notes of the following case in illustration. X., aged 39 years, was admitted to the Lariboisière, March 23, 1875, complaining of gradual loss of vision, extending over two years, without any loss of consciousness at any time. His face was pale, the eyes haggard, pupils somewhat enlarged, insensible to light; acuteness of vision reduced; rather more on the left than on the right. Ophthalmoscopic examination showed hypermetropic structure of the eyes, large physiological excavation of the papillæ, veins large, gorged with blood, arteries small, all else physiological on both sides.

All horizontal movement of the eyes was wanting, both alone and when both were attempted to be moved together. Movements of elevation and depression could still be performed, but to an impaired degree on the left side. The day after his entrance into the hospital, the patient was agitated, suffered severe pains; the right side of the body was seized with cramps; cutaneous sensibility was preserved; replies sluggish. Death ensued in the evening.

Post-mortem examination showed an average amount of fluid in the ventricles, adherence of the meninges about the left cerebellar fossa. The cortical layer of the left lateral lobe of the cerebellum showed gray softening as far as the white substance, which was healthy. The other portions of the cerebellum and cerebrum were also in good condition. Only the cortical substance of the inferior vermiform process was affected with a certain degree of softening.

In fact, this was a lesion limited to a certain portion of the gray substance of the cerebellum, to which was due in this particular case loss of horizontal movement of the eyes. X.

CONTRACTION OF THE TRAPEZIUS, SIMULATING DEVIATION OF THE VERTEBRAL COLUMN, TERMINATING IN CURE.—I. C. T. Pravaz (*Centralbl. f. Chirurgie*, from *Gaz. Hebdom.*, 1874, No. 30) records the following case:

A young girl of fourteen was affected, after some severe mental disturbance, by a deviation of the spine, the bending of the vertebral column progressing gradually for four months, until scoliosis to a marked degree was attained. The dorsal vertebræ were most severely affected, the convexity above being to the right, with compensating deviation below. The upper and inner angle of the scapula was raised, the lower angle drawn strongly off. The upper part of the right tra-

pezius was hard, and painful to pressure. By faradization of the anterior serratus magnus the scapula could be brought into position again. Galvanization of the trapezius, douches, massage, all were of no avail. Hypodermic injections of a one per cent. solution of atropia to the extent of two to four drops twice a week were then ordered. No effect was felt from these until the dose had been increased to six drops, which brought on general toxic symptoms. The spinal deviation began to amend from this time, and eventually the case ended in entire recovery.

Dr. Pravaz adds short notes of two similar cases coming under his care, both of which were successfully treated by atropia-injections. X.

ANTHELMINTIC ACTION OF KAMEELA.—M. Blondeau (*Bull. Gén. de Thérap.*, May 15) has employed the tincture of kameela with success in cases of tænia. He gave, in one case, f3vj tincture of kameela in infusion of sage, divided into three doses and taken at intervals of an hour,—at nine, ten, and eleven in the morning. At one o'clock in the afternoon, without having experienced the least colic, the patient voided an enormous tænia, the head of which was unfortunately missing.

This anthelmintic possesses, according to M. Davaine, who also advocates its use, the following advantages: it is not disagreeable to take, it does not cause colic, and it need not be associated with a purgative.

(NOTE.—Kameela is obtained from the capsules of one of the Euphorbiaceæ,—the *Rottlera tinctoria*. It is a red powder used in dyeing silk. Its use as an anthelmintic has been suggested by Hunsby. Anderson, who has also employed the tincture, has never gone beyond the dose of f3iiss.) X.

MIXED INJECTIONS OF MORPHIA AND ATROPIA IN THE DYSPNŒA OF PHTHISICAL PATIENTS.—Every one who has had charge of consumptive patients, says Dr. Forcauld, is struck by the powerlessness of therapeutics in presence of those attacks of dyspnœa which render the last moments of these unfortunates so painful.

Struck with this fact, Dr. F. has made numerous experiments with narcotic injections upon patients under his charge, which he details at some length in *Le Mouvement Médical*, May 22. His conclusions are as follows:

1. The mixed injection (equal parts solution of muriate of morphia 1-30 and sulphate of atropia 1-100) presents all the advantages of the injection of sulphate of atropia, without its inconveniences.

2. Six drops of the mixed injection give, as against suffocation, as good results as fifteen drops of solution of muriate of morphia.

3. As after the employment of either the morphia or the atropia alone, there is a diminution in the number of respiratory movements, in the temperature, and in the pulse. X.

THE EFFECT OF REPEATED VENESECTION UPON THE GASES OF THE BLOOD.—The following are the results of a series of experiments instituted to determine the influence of the velocity and quantity of blood upon animal combustion, by Dr. Dittmar Finkler (*Archiv für Physiologie*).

With the increasing loss of blood the oxygen of the venous blood decreases in a manner that is surprisingly rapid; whilst the carbonic acid shows only an unimportant rise.

The consumption of oxygen is absolutely independent within certain limits of the velocity of the blood-current; this law seems also applicable to the formation of carbonic acid.

A result of great interest from his experiments was that after a venesection amounting to one-third of the

whole quantity of blood, no diminution whatever of the consumption of oxygen took place; and the formation of carbonic acid was apparently just as little affected, at least in the course of the next hour after the experiment. This is renewed and unmistakable evidence, in conformity with Pflüger's law, that the consumers of oxygen are to be looked for in the tissues. W.

PHYSIOLOGICAL STUDIES ON A PATIENT WITH ARTIFICIAL ANUS (Démarquay: *Centralblatt für Chirurgie*, No. 14, 1875).—The patient upon whom these investigations relative to the course of the contents of the intestine were made was a man aged 63 years, in whom an artificial anus opening into the lower part of the small intestine had been established by the sloughing of a strangulated hernia.

When the patient suffered no digestive derangement, a tolerably long time elapsed before the altered food, which was colored with subnitrate of bismuth, made its appearance at the fistulous opening; if, however, there was any irritation of the digestive tract, the altered food was seen at the orifice in twenty minutes.

For the purpose of testing the rapidity of absorption of the mucous membrane of the intestine, one hundred grammes of mucilage containing one gramme of iodine were introduced into the intestine through the fistula. A catheter was passed into the bladder, and after eight minutes both the urine and the saliva were found upon testing to contain iodine. If the solution of iodine was introduced into the stomach, forty minutes elapsed before a characteristic reaction was obtained from the urine; if into the rectum, twenty-five minutes. After an injection into the connective tissue, iodine was found in the saliva in twenty minutes, and in forty in the urine. Démarquay concludes that the cause of the more rapid absorption from the intestine must be sought in the epithelium, and not in the venous system, since this latter is more plentifully developed in the stomach.

W. A.

FRACTURE OF THE PELVIS, WITH RUPTURE OF THE BLADDER, AND DIAPHRAGMATIC HERNIA OF THE LIVER (G. Jüdel: *Centralblatt für Chirurgie*, No. 14, 1875).—A laborer, aged 35 years, fractured his pelvis by a fall from a great height, and this injury was followed immediately by paralysis of the sphincter ani, and later by that of the sphincter vesicæ. A large bed-sore healed, as did also a perforation of the bladder, and six months after the injury the patient died of repeated attacks of erysipelas.

At the post-mortem examination it was found that there had been a longitudinal fracture of the sacrum, which passed through all the sacral foramina of the right side and extended into the coccyx, which had united with considerable displacement of the fragments. There had also been fractures of the transverse processes of the lumbar vertebræ from the second to the fifth, which had also united; a comminuted fracture of the ascending ramus of the right pubis, and a simple fracture of the descending ramus of the same bone. There was also a diaphragmatic hernia of the liver.

W. A.

PUNCTURE OF STRANGULATED HERNIA (Ollivier: *Centralblatt für Chirurgie*, No. 22, 1875).—A man aged 64 years had an inguinal hernia, which had been strangulated for twenty-four hours, and taxis under chloroform had proved unavailing for the reduction of the tumor. Forty-eight hours after the first symptoms of incarceration a puncture was made, followed by the evacuation of a quantity of brownish serum. The ordinary operation for strangulated hernia was then performed, the gut replaced, and death resulted eight hours later.

The patient in a second case was a woman aged 65 years, who had a large umbilical hernia, which had

been strangulated some hours. Chloroform was not used in her case, owing to the presence of some cardiac lesion. A trocar was thrust into the tumor, and a wine-glassful of serum evacuated, when the hernia was reduced by taxis and the patient made a speedy recovery.

The puncture, to be of use, must be made a short time after the constriction of the intestine occurs, while the elasticity of the coats of the gut still exists; so that, by their contraction upon themselves, the opening made by the trocar may be closed.

W. A.

A CASE OF ALMOST ENTIRE ABSENCE OF THE CLAVICLES (O. Kappeler: *Centralblatt für Chirurgie*, No. 22, 1875).—The examination of a girl of 16, who was of small stature but otherwise well developed, showed that both clavicles were almost entirely wanting. On the right side of the sternum there was a rudimentary bone one and one-half centimetres in length, and on the left side one of four centimetres. The patient was able to draw the shoulders so near together that there were but nine centimetres between the heads of the two humeri.

The sterno-cleido-mastoid muscle of one side was absent; but it is of interest to observe that there was no disturbance of function; the patient, for instance, could readily support the trunk upon her hands.

W. A.

THERAPEUTIC NOTES.

GASTRALGIA.—M. Gaillard employs the following formula with success against the element of pain as occurring in dyspeptic gastralgia. He designates it by the name of "white drops."

R Aquæ laurocerasi, fʒiiss;
Morphiæ acetat., gr. iss.

One or two drops are to be taken on a lump of sugar after meals.

IODOFORM CRAYONS.—The following crayons are recommended by Dr. Leblond in superficial ulcerations of the cervix; they are introduced and kept in position with the aid of cotton wadding and a tampon.

R Pulv. iodoform., ʒiiss;
Acaciæ pulv., gr. viii;
Mucilaginis, q. s.

Ft. in pil. mas.

Divide into ten cylinders of equal size, about one and a third inches in length, and dry in the air for twenty-four hours. These cylinders are hard and resistant, and may be divided easily into fragments of any desired length. They should be kept in the dark.

ANTI-SCROFULOUS SYRUP.—

R Potass. iodid., ʒi;
Tinct. iodinii, ʒj;
Syrupi gentianæ,
Syrupi quiniæ, aa fʒii.—M.

One or two dessertspoonfuls a day in scrofulous cases, combined with cod-liver oil, etc.

ANTI-BLENNORRHAGIC POTION.—

R Tinct. hyoscyami, fʒss;
Acid. benzoic., gr. xv;
Mucilaginis, fʒiv.—M.

The potion to be taken in the course of twenty-four hours by patients in whom it is too late to have recourse to the abortive treatment, and where, although the discharge is decidedly purulent and micturition painful, it is too soon to employ balsams. Cooling drinks are to be prescribed at the same time, and also injections of pure water frequently repeated. After some days of this treatment the pain ceases, and it is then proper to begin the administration of copaiba and cubebs.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

SOME OF THE ATTRACTIONS OF OUR PROFESSION.

SOME years since, when, by invitation from our Board of Health, the smallpox visited us, a certain fashionable parish rang with the praises of a no less fashionable clergyman, because he visited those whom the pestilence had seized. No one ever thought of the doctors, and, indeed, the doctors never thought of themselves, but took, as they always do, the exposure as a matter of course. The members of the profession who have fallen at the post of duty in typhus-wards, in cholera-hospitals, and in pest-stricken cities, as well as amid the clash of battle, are now legion. It is not, however, to chant a pæan to their valor that we desire to-day. We want only to call attention to some lesser dangers in the path of the profession, and to one danger that to some may seem greater than all. There is something worse than death, and such a thing seems to us to be sent, though innocent, shipwrecked in health and an outcast into the world with the brand of sin and licentiousness upon the forehead. Recently the English journals have been a good deal occupied with the discussion of the infection of doctors by syphilitic patients, and some very sad cases related,—one, especially, in which a highly-educated, brilliant, and most correct man became a wanderer, and almost a Pariah, through the action of a virulent infection upon body and mind.

Cases of this character are not so rare as some imagine. A prominent surgeon said, not long

since, in our hearing, that he had seen three within a short time. Quite recently, in London, a surgeon contracted a primary sore on the finger, and, before he suspected its character, he inoculated a patient, who instituted a civil suit. By a strange perversion of justice, the unfortunate doctor was mulcted in heavy damages. As the danger of infection is so real, the suggestion of one of the London journals that physicians when called to doubtful cases of obstetrics should protect their fingers by fine india-rubber stalls seems worthy of attention.

THE annoyance, and sometimes the loss, by mal-practice suits has been sufficiently exemplified from time to time in this country, but it has been reserved for the Lincoln Assizes of England to invent the last means of "torture to a medical man." A Dr. Wood has been put on trial for manslaughter because, forsooth, he did not stay long enough, or administer sufficient brandy to a woman, who, apparently through no fault of his, and unknown to him, was doomed to die when he left her. The doctor was summoned hastily to a Mrs. White, found her suffering from uterine hemorrhage, and delivered her without delay. The woman seemed exhausted, but bore the delivery well, and ten minutes after the doctor left. It appears to be acknowledged that up to his leaving his procedures were proper and were skilfully performed. But the woman sank, and died three hours afterwards. At the post-mortem a uterine rupture was found. It had not given rise during life to any symptoms, or at least certainly had not been suspected. Nevertheless, for leaving, probably under the press of other engagements, ten minutes after the completion of delivery, Dr. Wood may yet serve out his term of years with the common convicts, and go out finally an utterly ruined, broken man. Who would not be a doctor?

NEW JERSEY STATE MEDICAL SOCIETY.

IT may not be known to all of our readers that this Association is the oldest in the United States, the first session having been held at New Brunswick, July 20, 1766, and Dr. McKean elected President. During the Revolutionary War there was a break in the otherwise continuous chain of annual sessions since 1766. The Society was reorganized, or rather revived, in 1781, the same year in which the Massachusetts Medical Society came into being. There was a medical society in this city in 1768, but the oldest association now existent is the College of Physicians, which was founded in 1787. Our State Society was not established until 1848.

No charity appeals more forcibly to the fathers and mothers of little ones than does the Children's Sea-Shore House, with whose objects all our readers are, without doubt, well acquainted. Under the management of Mr. J. S. Whitney, the institution is steadily increasing in usefulness, and during the summer of 1874 afforded the benefits of cool, salt air, with proper attendance and nourishment, to one hundred and eighty children, who would otherwise have languished, and many of them perished, in our by-ways. But what is this among so many? That it may be more, will not our readers call the attention of their rich clients, when leaving for the sea-shore, to this most serviceable of charities?

THE *Irish Hospital Gazette* thinks "it is quite time that those who have the education of the male human animal should by some means drive or hammer it into his dense moral consciousness that his procreative power was not given him solely as a means of amusement, and that women have other functions besides that of ministering to this often morbidly excited appetite." We agree perfectly with this, and also with the sentiment that "the rights of the husband," so called, are often in truth the wrongs of the wife. But then the hammer of Thor would be required to drive this into the head of the ordinary male animal of the species homo.

DR. GEORGE H. BIXBY, of Boston, respectfully solicits from members of the profession in the United States who have performed ovariectomy their experience in brief in regard to pregnancy subsequent to that operation. Answers to the following questions will be gratefully received and duly acknowledged:

Number of cases,	Adhesions,
Age,	Treatment of pedicle,
Social state,	Number of births,
Previous births,	Nature of births,
Subsequent history.	

Address 143 Boylston Street, Boston, Massachusetts.

THERE appears to be some reason for the practice of cremation in the West. Apparently owing to the great scarcity of land, in some places the dead seem to be crowding out—or rather in—the living. In Grand Rapids, according to Prof. Kedzie, a certain street was plague-haunted, and, on investigating the cause, the soil was found to be gravelly and porous, and the wells within twenty feet of the graves. Evidently the families had been drinking the "drippings of death." A case of cannibalism in disguise.

LEADING ARTICLE.

JABORANDI: ITS PHYSIOLOGICAL ACTION.

THIS drug has been employed for a long time in South America, and received its first notice, under the various names of *Jaborandi*, *Jaguarandy*, and *Jamguarandi*, from Dr. T. J. H. Langgard in his "Diccionario de Medicina domestica," Rio Janeiro, 1865. It attracted no attention, however, until 1874, when it was brought to Paris by M. Coutinho. Its botanical source is not known, but is believed to be *Pilocarpus pinnatus*,—a member of the rue family. The leaves are oval, elongated, entire, 1.2 to 1.5 inches long, and one-third to one-fourth as broad; their taste is bitter, their odor hay-like. Rabuteau (*L'Union Méd.*, 1874) failed to find in them an alkaloid, and believes that their activity depends upon a bitter principle. Dr. Frerichs asserts (*Berlin. Klin. Woch.*, May, 1875) that the virtues reside solely in the bark and leaves.

When an infusion of from sixty to ninety grains of jaborandi is given to an adult, in about ten minutes the face and neck become deeply flushed, and free perspiration and salivation commence. The sweating and salivation are excessively profuse, and last from three to five hours. There is not rarely nausea, and sometimes even vomiting. After the sweating has ceased, the patient is left more or less exhausted. The nasal and lachrymal secretions are also, at least sometimes, increased under the action of the drug, and M. Gubler has noted diarrhoea, which in the experiments of Ringer and others has not been present.

These effects of jaborandi are in the adult quite constant, although, occasionally, subjects have been found who were not susceptible to the action of the drug, and, very curiously, in Dr. Ringer's experiments children were found to be very unsusceptible, although doses of sixty grains were employed.

Sometimes the salivation is more profuse than the sweating (Féréal, *Four. de Thérap.*, January, 1875), and very frequently it commences before the sweating. During it the mouth is warm, and there is often a feeling of tenseness about the maxillary glands; the saliva contains abundance of salts and of ptalyne, as well as a small excess above normal of urea (*Four. de Thérap.*, vol. iii.). The free salivary secretion appears to be due to a direct action upon the gland or its nerve-peripheries. According to I. N. Langley (*British Med. Jour.*, p. 247), in the frog the mouth and skin, after the exhibition of jaborandi, become covered with a viscid secretion, and in the dog and rabbit there is profuse salivation. In the experiments both of Langley and M. Carville (*Four. de Thérap.*, January, 1875), section of the chorda tympani high up or low down after it has joined the lingual nerves did not affect the action of the drug. Further, in another of M. Carville's experiments, the lingual and pneumogastric nerves and the upper sympathetic cervical ganglia having all been cut or destroyed, jaborandi still produced free salivation.

Evidently the drug acts either upon the glandular tissue or upon the nerve-endings within the gland. As an injection of atropia immediately arrested the secretion in the experiment last mentioned, it appears probable that the drug influences the peripheries of the nerves. The sweat produced by jaborandi is often enormous in quantity (nine to fifteen ounces by estimation). It is stated to be at first acid, then neutral, and, finally, often clearly alkaline. In the analyses of M. Robin the chlorides were found in excess, the carbonates and phosphates in very minute amount, and the urea in more than five times its normal proportion, the amount eliminated in the sweating being estimated at from ten to fifteen grains. MM. Hardy and Ball believed that in their experiments the average amount of urea eliminated by the skin was seventeen grains (*Jour. de Thérap.*, 1874). The urine appears not to be usually acted upon. Hardy and Ball state that urea is diminished, but neither their experiments nor those of others are yet sufficient to determine what is the general effect of the drug upon the elimination of urea. M. Gubler states that when jaborandi is given in small repeated doses it acts as a diuretic.

M. Robin affirms that before and during the early stages of the sweating from jaborandi the temperature rises 1° to 2° Fahr., but afterwards falls as much below the normal point, and remains depressed for one or two days. In Ringer's experiments (*The Lancet*, vol. i. p. 157, 1873) the primary rise of temperature occurred only once, and the fall, which was always present, was not persistent, the bodily heat recovering itself in a few hours.

In the experiments of F. Riegel (*Berliner Klinische Wochenschrift*, 1875, p. 86) the rise of temperature was either altogether absent or was very trifling, so that at the farthest the primary increase of the bodily heat can be looked upon only as an occasional and non-essential feature of the action of the drug.

The only study of the action of the drug upon the circulation as yet published is that of Mr. Langley. He found that in both the rabbit and the dog the injection of jaborandi into the jugular vein produced an immediate fall of the pulse. This fall was probably due to stimulation of the inhibitory nerves, since in the frog the drug produced cardiac arrest in diastole, which, when atropia was injected, immediately disappeared, the heart-action at once recommencing. Mr. Langley believed that he could see in the frog's web dilatation of the arteries follow the injection of the drug. In a rabbit in which the sympathetic had been destroyed upon one side, intravenous injection of the remedy was followed by contraction of the vessels on that side only. These experiments are not entitled to much weight; and as Dr. Langley found that the arterial pressure is not materially affected, being only slightly lowered, it seems most probable that the drug exerts no action on the vaso-motor nerves; but further investigations are necessary to determine this.

During the constitutional action of jaborandi, contraction of the pupil and some disturbance of vision have been noted by several observers. The local action

of the drug upon the organ has been especially investigated by Mr. John Tweedy (*The Lancet*, 1875, vol. i. p. 159). He found that when applied to the eye jaborandi contracts the pupil, produces impairment of vision by benumbing the retina, and also causes tension of the accommodative apparatus, with approximation of the nearest and farthest points of distinct vision.

In man, muscular tremblings have been observed several times during the action of jaborandi, and Mr. Langley found that in the frog it induces violent convulsions, without affecting perceptibly the irritability of the nerves or muscles. As the convulsions were not influenced by excision of the brain, but were arrested by destruction of the cord, they are probably spinal in origin.

It is asserted that jaborandi and atropia are antagonistic (*Berliner Klinische Wochenschrift*, May 3, 1875).

CORRESPONDENCE.

NEW YORK, June 5, 1875.

SATURDAY afternoon is Prof. Thomas's time for operations at the Woman's Hospital. To give your readers some idea of his methods of treatment, I shall make the first part of my letter really a clinical report.

1. *Cauliflower excrescence on the cervix uteri.*—This was supposed to be of malignant character; but at all events Dr. Thomas deemed it good surgery to remove the entire cervix, and this was accomplished with remarkable facility by means of the galvano-cautery.

The battery he used was the zinc and carbon one of Dr. Byrne, of Brooklyn, in which the fluid (the bichromate of potassium and sulphuric acid solution) is kept in motion by a current of air forced into it from an india-rubber hand-bulb as often as necessary. A Sims speculum having been introduced, the uterus was dragged well down towards the ostium vaginae, and the cervix secured by the teeth of a strong pair of grapple-forceps, whose square shoulders also prevented the platinum wire of the instrument from slipping off. After the wire was adjusted, it took just five minutes to cut through the uterine tissues, and there was not a drop of hemorrhage. In place of the cervix there was now a cup-shaped depression, with a clean-cut surface. Every portion of the growth had been completely removed. The mucous membrane of the vagina was slightly burned during the operation by reflected heat, but the injury was trifling, and the insertion of a roll of cotton saturated with glycerin, which would be useful as a soothing dressing, as well as to keep the vaginal surfaces separated, was the only after-treatment required.

Dr. Thomas said he would never think of operating in any other way in these cases, as furious hemorrhage, often endangering the life of the patient, generally results from other methods. He has performed the operation with the galvano-cautery over one hundred times, and never met with the slightest bad result, except in one case, when pelvic abscess followed. This

could not be attributed to the method, however, but might result from any form of operation.

2. *Menorrhagia*.—This was of long standing, and supposed to be due to granular excrescences on the lining mucous membrane of the uterus. As the patient was a single woman, a sponge-tent had been introduced the day before; but this is seldom necessary in those who have borne children. The tent removed, Dr. Thomas introduced his curette, which consists of a simple loop of copper wire, which can be readily bent in any direction, and soon confirmed the diagnosis by exhibiting some of the characteristic granulations, or fungoid growths, which are such a frequent cause of menorrhagia. He then scraped lightly, but carefully, the whole internal surface of the uterus, bringing away a considerable number of these; and the operation was completed. This procedure has been decried as dangerous and barbarous in the extreme (in fact, entirely beyond the bounds of legitimacy); but Dr. Thomas has found in it a remarkably simple means of completely curing an exceedingly numerous and distressing class of cases, and one which is entirely safe when used with proper precautions. He has employed it an innumerable number of times, and never met with the slightest accident, except in two cases. In one considerable hemorrhage, and in the other dangerous peritonitis, resulted. In the latter case, however, he used Sims's steel instrument,—which he considers dangerous, unless employed with great caution.

Not a month passes in which the curette is not applied at least once at his clinic at the College of Physicians and Surgeons, and, though the patients are obliged to return to their homes afterwards, the results are always most gratifying. Occasionally it is necessary to repeat the little operation. The condition of the uterine mucous membrane thus treated is very rare in unmarried females; resulting, as a rule, from abortion or normal parturition.

3. *Retroversion complicated by a fibroid in the posterior wall of the uterus*.—This fibroid feels precisely like one of the ovaries to the touch, but that it is not is proved by the fact that it is firmly attached to the uterus, moving whenever the latter is moved. Nearly all the different kinds of uterine displacements are amenable to treatment by some of the various forms of pessaries now in use; but three conditions may complicate a retroversion or retroflexion, any one of which may completely baffle all our efforts to retain the uterus in position. These are, first, the presence of a fibroid; second, old retro-uterine peritonitis; third, the absence of a cervix. In the present instance Dr. Thomas had the patient completely etherized, and then, inserting two fingers into the vagina, he pressed up the fundus till the organ was completely restored to position, as shown by the sound. Had he not succeeded in doing this completely by this manœuvre, he would have accomplished it by the use of the uterine repositr. He then introduced his own retroversion pessary, but expressed considerable doubt as to whether the patient would be able to tolerate it, on account of the presence of the fibroid.

In introducing pessaries, Dr. Thomas always keeps a Sims speculum in the vagina; as the instrument can be thus slipped up into place much more easily and accurately by the operator, and with much less pain and annoyance to the patient. Dr. Cutter, of Boston, was present on this occasion, and Prof. Thomas complimented him highly on the great efficiency of his improved pessaries. Dr. Cutter then spoke of the interesting investigations in the treatment of fibroids by electrolysis, which he and Dr. Kimball, of Lowell, have recently been making. They have now operated in forty or forty-five cases, often with the result of completely removing the tumor (even when of the size of a man's head), and, when this could not be done, of completely arresting its further growth. One death has occurred; but, as it took place some time after the operation, and no post-mortem could be obtained, it is questionable whether it should be attributed entirely to that. They use a battery, the surface of whose plates amounts to sixteen and a half square feet. The electrolysis is performed by corrugated needles piercing through the abdominal walls into the fibroid, and the effect produced is often so powerful as to occasion temporary syncope. We believe the idea was suggested to Dr. Cutter by General Kilpatrick's case, where a tumor was completely gotten rid of in this way by Dr. Lincoln, now of this city. Dr. Thomas was so impressed with the importance of these investigations that he promised Dr. Cutter to come on to Boston to witness the operation as soon as he could get three or four suitable cases together.

A great outcry having lately been raised in some of the public prints against the unwholesomeness of the material used for filling in the Harlem Flats (a section of the city known for a long time back as simply a pestilential swamp), a committee of the Police Surgeons visited the locality, at the request of the Board of Police Commissioners, for the purpose of investigating the matter; who reported that the filling was conducted in accordance with the principles of sanitary science, and that 95 per cent. of the material used consisted of ashes and street-sweepings; only 2 or 3 per cent. being composed of garbage or dead vegetable matter. From the directly contrary testimony of many clergymen and other intelligent residents of the neighborhood, as well as of several physicians of excellent standing, whose families are not only annoyed by the disgusting odors constantly arising from the filled-in district, but actually suffering from the disease engendered by it, and especially when we remember that this filling-in is done by parties who receive their contracts directly from the Police Department, and that each of these surgeons receives a considerable annual salary from the same department, one can hardly resist the unwelcome conclusion that this belongs without doubt to the order of "white-washing" reports.

One of the surgeons who signed the report having stated that it was not strictly in accordance with the truth, he was summoned before the Board of Police Commissioners to explain why he did so under the cir-

cumstances, when he said that the report was made out by Dr. Henry, President of the Board of Surgeons, and no opportunity was given the other members for discussing it, but that he signed it for the sake of preventing ill feeling on the part of his fellows.

That the Police Commissioners themselves are not altogether satisfied with the report is shown by the fact that they have requested a statement of the official opinion of the Board of Health in regard to the condition of the Harlem Flats. The matter was referred to the Sanitary Committee, who will make their report at an early date. At the last meeting of the Board of Police Commissioners it was resolved that the street-refuse should, unless approved by the Board of Health as suitable for filling in sunken lots, be taken to sea and discharged there, or otherwise disposed of outside of the city limits.

Smallpox has been increasing here somewhat of late, the number of cases for the last three weeks being 97, 111, and 117 respectively; and the Board of Health have appointed an additional corps of vaccinators in consequence, to serve for one month.

The demand for seats for the performance at the Academy of Music in aid of the Central Dispensary became so enormous that the managers announced that seats would be sold for the orchestra; but, this also proving an insufficient accommodation, they requested Mr. Rignold to give a *matinée* performance in addition. To this he readily consented; and there is no doubt that the Academy will be crowded to its utmost capacity, both afternoon and evening.

Dr. Mary Putnam Jacobi has recently received from Paris the bronze medal, awarded three years ago by the Academy of Medicine, for her graduating thesis. This gives her a rank of from fifth to eighth in a class of three hundred; gold medals being given to the first and bronze medals to the second four. This lady seems to have evinced an early taste for the study of medicine, for we learn from good authority that when about eight years of age she came in from the back yard one day and requested a knife. "What do you want it for?" asked her mother. "I have found a dead toad," she replied, "and I want to investigate his circulation."

PERTINAX.

135 SOUTH FIFTEENTH STREET, PHILADA., June 17, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR DOCTOR,—In your article on salicylic acid, in the last number of the *Times*, you have quite misrepresented a statement of mine at the Pennsylvania Hospital of having cured a case of favus by a saturated solution of the acid. It was by a saturated tincture, or, if you choose, by a saturated *alcoholic solution*. This, you can readily see, will be of importance to any one following my trial of it. The acid's want of solubility in water has long been practically known at the Hospital. I have myself since the 1st of February been using the aqueous solution only as a final wash on stumps and wounds prior to closing them. I have used the acid in collodion (5 grs. to ℥j), to destroy the burn-

ing and irritating effects which have heretofore rendered that article almost useless in surgery. I have used such collodion by strips of tarlatan gauze, and got most perfect coaptation of wounds and complete union when the part has been thoroughly enveloped with cotton wadding impregnated with the acid and applied according to Prof. Guérin's method,—*i.e.*, for a considerable distance around the injured part. In this way I have had direct union of compound fractures of the head, face, arms, and legs, and of stumps of the phalanges and fore-arm. In all such dressings torsion was the means of arresting hemorrhage employed.

The impregnation of the cotton was made from the saturated tincture by means of an atomizer. I have frequently seen most satisfactory results from the collodion charged with the acid in erysipelas and chronic eczema, applied as iodine used to be in the former of these complaints. My experience with it will suggest its having a fair trial in a thousand different ways.

Very truly,

ADDINELL HEWSON.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

DECEMBER 2, 1874.

DR. ALBERT H. SMITH read a paper on "Quinia as a Stimulant to the Pregnant Uterus." The author stated that his views were founded upon an extensive and careful trial of the remedy upon the pregnant uterus. As to its effects upon the organ in a quiescent state, he had only been able to make observations incidentally, but thought his experience was sufficient to establish the fact that quinia has no power in itself to excite uterine contractions. He had at times had under care pregnant women, with diseases of malarial origin, in whom quinia sulphate in doses varying from twelve to twenty grains in the twenty-four hours had not disturbed the uterus; still further, in cases in which, with the symptoms of malarial poisoning, the pregnant uterus had already become disturbed, where there were pelvic distress, tenesmus, and sacro-lumbar pain of a paroxysmal character, quinia in large doses had not only relieved the constitutional symptoms, but also quieted the local pains.

As to the effect of quinia upon contractions of the uterus developed prematurely, from accidental causes, in abortions or early deliveries, Dr. Smith's observations have been limited; but in five cases he had administered fifteen grains of the sulphate, after the process had advanced beyond the possibility of arrest and the pains were recurring with regularity, and in none of these instances was there any perceptible increase in the frequency or efficiency of the contractions, or, when there was hemorrhage, any lessening of the flow.

When the uterus is in normal labor at full period of gestation, then quinia plays an active part in aiding parturition. For a number of years Dr. Smith has been in the habit of using quinia occasionally in cases of marked inertia during the stage of dilatation, in combination with other remedies, such as the administration of diffusible stimulants or hot drinks, abdominal friction, or any other means that might suggest itself in preference to the use of ergot, which he had long pro-

scribed on account of its dangerous influences upon the child, its occasional fearful risk to the mother, and its annoying uncertainty of action.

For a few months past, he had been experimenting with sulphate of quinia as a promoter of normal labor from the onset of the process, and had come to the following settled conclusions: quinia increases the activity of the normal uterine contractions; the pains becoming more frequent and more intense, the expulsive power being greater, while the yielding of the circular fibres of the os is more prompt; the contractions maintaining their proper intermittent character, the relaxation and rest in the interval being complete; showing in this respect an entirely different action from the continuous spasmodic contraction caused by ergot. The efficiency of the contraction may be judged of from the fact that in the thirty-two cases having no obstruction, although many were primiparæ, and a larger than usual proportion occipito-posterior positions, the average duration of active labor after the quinia was administered was about one hour. In a considerable number of the cases included Dr. Smith had in several previous labors required to use forceps to combat inertia in the second stage.

Quinia promotes permanent tonic contraction of the uterus, after the expulsion of the placenta. Several of the patients had had flooding under his care previously, some of them habitually, and some stated that they always had a profuse and weakening flow in all their other labors. In the whole forty-two cases Dr. Smith had not one case of flooding, and, as a rule, the uterus contracted firmly after the second stage was completed, and showed no tendency to relax afterwards.

It diminishes the lochial discharge to a normal standard; many of the patients expressed surprise at the small amount of flow during the twenty-four hours following labor. Its use is followed by less after-pains than usual in a majority of cases. It reduces the frequency of the mother's pulse, and relieves the nervous demoralization so often seen in the first stage of labor.

Given during parturition, it never disturbs the brain or causes its usual unpleasant effects, even in patients who at other times are very susceptible to its influence. Although the dose has been uniformly fifteen grains, in only one case was the slightest sensation of cinchonism manifest, and that lasting only a moment, in a lady who knew what she had taken, and was, perhaps, quite prepared to feel it.

Although fully persuaded of the value of quinia in parturition, Dr. Smith believes that it has no inherent property of stimulating the gravid uterus to contraction; being inert as to any effect upon the womb in a quiescent state, and having no decided action in accidental labors at any period of gestation. That to its property as a general stimulant and promoter of vital energy and functional activity, and to that alone, is due its influence upon the uterus in normal parturition; producing then no action peculiar to itself, but merely increasing the power of the uterus to expel its contents by its own natural method, converting what is a defective or even pathological action into a simple physiological process. That by availing ourselves of this power we may by administering full doses of the sulphate of quinia at the onset of labor favor the rapid and safe termination of what might otherwise be a tedious and exhausting work.

REVIEWS AND BOOK NOTICES.

A MEDICAL VOCABULARY. By R. G. MAYNE, M.D., LL.D., and J. MAYNE, M.D., F.R.C.S. Edin, L.S.A. Fourth Edition, Revised and Enlarged. Philadelphia, Lindsay & Blakiston, 1875.

This little work is one of the most convenient and reliable medical vocabularies which has been given to the profession.

The definitions sometimes lack clearness, from their exceeding brevity and terseness; but this is largely compensated for by the fulness and accuracy with which the derivation of each word is given, and by the unusual number of words belonging to the collateral sciences which this condensation has enabled the editors to introduce.

SELECTIONS.

A REMARKABLE CASE OF CATALEPSY AT THE COCHIN HOSPITAL, PARIS.—The case of catalepsy which has been under observation at this hospital, and which has been attended with sufficient publicity to allow the most satisfactory verification, cannot fail to afford interesting matter for thought to the physician as well as to the philosopher and historian. There is here no question of those facts which mysticism, fanaticism, or credulity have often shrouded in mystery by attributing to them a miraculous or supernatural aspect, turned to profit according to the requirements of the moment: here there is only question of a pathological fact of an exclusively scientific nature. A patient, Marie Lecomte, who had come into Dr. Desprès's wards for a surgical affection, was soon afterwards attacked with dysmenorrhœa and uncontrollable vomitings; these complications were followed by nervous aphonia and suppression of the urinary excretion, then supplementary derivation of urine by vomitings. At the beginning of April the urinary function, which had long been suspended, was re-established, when on April 5 the patient fell into a lethargy; her breathing was imperceptible, her lips were pink, and her complexion rather roseate than pale. The trunk and limbs were in a complete state of relaxation; the pulse was normal; involuntary motion was quite abolished; the finger, placed through the half-opened mouth on the glottis, the most sensitive point in the whole animal economy, provoked neither cough nor any other movement. M. Desprès, therefore, ordered that no food whatever should be given to the patient, even with the canula used to feed paralytic patients, for fear that any attempts at giving nourishment should produce asphyxia. On April 6 the whole of the patient's muscles were tense and hard; they were contracted. It was cadaveric rigidity, minus death, for the pulse registered seventy pulsations, and the temperature of the body, taken with a thermometer placed under the armpits, measured 100.4° Fahr. At this time the patient was cataleptic, and the lethargy continued. This condition lasted six days, during which the patient remained apparently dead and took no nourishment. During this attack the facts observed were, in the first place, muscular rigidity. The limbs were in a state of extension; the arms fixed tightly to the body gave the patient a resemblance to a mummy; it was necessary to use force to change the position of a limb. The limbs, hands, and fingers remained for many hours in the very fantastic positions in which they were placed, and then gradually returned by jerks to the position whence they had been removed, and so remained in the same previous state of contraction. There was not the slightest relaxation of the muscular

ZIEMSEN'S CYCLOPÆDIA OF MEDICINE.—On page 290 of vol. iii., second text line from the bottom, the word "ounces" should read "drachms." As the error might lead to serious consequences, we would thank our exchanges to give publicity to this notice.—*N. Y. Medical Record.*

contraction. The patient was seen every hour of the day and night, and her condition was always the same. Many attempts were made to awaken the patient, such as pricking the most sensitive points, introducing rigid stems into the nostrils; but nothing had any effect, and the physicians who used these means were convinced that the abolition of the reflex movements was a certain fact.

M. Desprès again tried an experiment, tending to show that the muscular contraction was involuntary, as a conclusive proof. The muscles of the abdomen contracted like those of the rest of the body, and retained the form imparted to them. By forcibly applying the hand to the abdomen, the muscles were depressed, and the imprint of the hand remained visible during three minutes at least. These muscles remained contracted in the position imparted to them, a thing which could never be obtained by the effort of the will under any circumstances. On the seventh day of the crisis, the patient murmured some words, and asked for something to drink; she drank a small quantity of coffee and broth, which she partly vomited some hours after. On the eighth day the patient fell back again into the cataleptic condition, the fresh crisis lasting forty hours. On the twelfth day there was a fresh partial awakening. The patient called her neighbors, the house-surgeon, and the sister of the ward, without recognizing the persons she called and without answering the questions addressed to her; she drank some more broth and coffee, which she vomited the next day. She had a relapse on the thirteenth day, with catalepsy and lethargy, lasting sixteen hours. On the fourteenth day there was partial awakening; then catalepsy, lasting about eight hours in the night. In the intervals of the crisis the patient drank broth and coffee; but, as she afterwards vomited a portion of what she had taken, the abstinence had markedly emaciated her, and the small pulse, marking 100, showed that want of food was producing its usual effects. From that time the cataleptic crisis ceased. The patient remained in a state of dreamy wakefulness,—that is to say, of somnambulism. She did not recognize any one, but was yet able to take drink, and specially coffee and milk. On the seventeenth day a fresh symptom made its appearance. The patient during her dream had complained of not being able to see, and believed herself to be blind. As a matter of fact, a shining object placed before her eyes, and even the light of day, did not seem to be perceived by her. By automatic movements, against which all efforts were useless, she got her fingers to her eyes, and rubbed them with a sort of febrile excitement to such an extent that it was found necessary to tie her hands. Finally, her sight returned to her on the eighteenth day; she recognized some people in the ward, and was able to take liquid food in a regular way. On the twenty-fifth day the patient did not vomit any more, but retained the nourishment she took; she was entirely convalescent, and only complained of pains in her limbs, which she compared to those caused by fatigue. On the thirtieth day she was able to get up, and on May 5 she was entirely cured.

Cases like that which has occurred at the Cochin Hospital are not new, but they have rarely been well observed. The remarkable researches of Professor Lasègue have made known the intermittent catalepsy of hysterical subjects, of ecstatic maniacs, and even of healthy persons. It is a condition which may be provoked at will or which overtakes patients somewhat suddenly; as in the case of the judge quoted by Fehr,* who, having been insulted on the bench, and having risen to reply, remained with outstretched arm and open mouth in a state of catalepsy which lasted more than a quarter of an hour.

The catalepsy complicated with somnambulism of hysterical patients, which appears in crises of an hour or longer, is now thoroughly well known: if it be not simulated, it is at least kept up by the will of the patients, or by a tendency which they could resist if they would. This kind of catalepsy is almost exclusively the melancholy privilege of women and priests.† Cataleptics who have taken advantage of religious superstition, and who have sometimes been encouraged by the Roman Catholic Church, belong to that group of cases in which catalepsy is complicated with somnambulism or ecstasy. Louise Lateau, an account of whom will be found at pp. 128 and 158 of the *Medical Record*, is a cataleptic of this kind. The cataleptic of the Cochin Hospital presents another variety of catalepsy: the attack begins with lethargic coma, and generalized muscular contraction comes on twenty-four hours afterwards. When the patient awakes she is somnambulant. The catalepsy, accompanied by lethargy, lasts six full days, during which there is apparent death. After the awakening there are three relapses, and the disorder only seems to yield bit by bit, after alternations of awakening and lethargy for several days. Here is a case of disorder which is nowadays called neurosis, and connected with the hysterical temperament, in which nothing of the marvellous has been observed. Marie Lecomte is a foundling, four-and-twenty years old, who had never left the Foundling Hospital and the farm where she had been boarded out. A quiet and well-conducted unmarried woman, she had neither exaggerated religious ideas nor vicious habits. Both before and after her attack, during the state of ecstasy and somnambulism which followed the six days of catalepsy, she held no continuous conversation, said no prayer, nor pronounced the name of God; but asked for ice or water to drink, called those of her hospital neighbors whom she knew best; in fact, spoke naturally according to her tastes and habits. As the Paris hospitals, open to every one, are usually given in charge to medical men who are accustomed to sick people and see things from a positive point of view, in accordance with science, no attempt was made to find any supernatural utterances in the words spoken by the patient. The case of Marie Lecomte, which should be published with all its details, becomes a scientific fact, with regard to its authenticity far above the facts reported in the sixteenth, seventeenth, and even eighteenth centuries. At those epochs, in fact, the hysterical cataleptics or insane devotees passed for the elect of God, and the ecstatic or somnambulant cataleptics who did not speak of the Divinity were exorcised and even burned. As regards lethargy and abstinence from food, Marie Lecomte is not the most remarkable type. Some maniacs have remained equally long in the cataleptic and lethargic state; but the relation of the facts is not clear, and it is not recorded if the muscular system was contracted during the whole time the fit seemed to last, as it was with Marie Lecomte during six whole days.

It may not be unadvisable here to reply to a question which may arise in some minds. It is whether, in presence of this state of apparent death, it may not have been possible that ignorant persons may have believed death to be real, and have interred the patient. The answer is easy: the most inexperienced practitioner who might have felt the pulse could not have had one moment's doubt on the subject, and there is ground for believing that if, since the beginning of this century, a cataleptic patient, in a state of lethargy, has been interred alive, the medical man could never have looked at the supposed corpse. This is clearly reassuring, and it may be deduced from the case of

† Rondelet speaks of a priest who fell into ecstatic catalepsy when the history of the Passion was read. (*Methodus Cur. Morb.*, ed. 1583, lib. i. cap. 20.)

* Fehr, *Hiera Picra, seu de Absinthia*, 1667.

Marie Lecomte that, notwithstanding the appearances of death, the signs of life were so decided that the most ignorant of practitioners could not have felt for an instant the slightest doubt as to the vitality of the patient.—*London Medical Record*.

MACEWEN ON PENETRATING WOUNDS OF THORAX AND ABDOMEN TREATED ANTISEPTICALLY.—Dr. William MacEwen (*Glasgow Medical Journal*, January, 1875) gives four cases, all treated in the same way, and all with equally good results.

Case I.—A boy, aged twelve, was stabbed in the back, and only after much and careful probing was a visceral wound found, and then in the lung-substance a piece of the blade of a pocket-knife; this was after some difficulty extracted, and was the means of detecting the assailant by fitting his broken knife. The wound in this, as in other cases, was thoroughly injected with carbolic lotion (one part in forty) and then dressed in the usual way with antiseptic gauze. The probing was in the first instance persevered with, in consequence of a peculiar catching at the throat during breathing. In three weeks the patient was perfectly well.

Case II.—A man, aged forty-six, was stabbed on the left side of the chest, the wound passing into the anterior mediastinum. The heart could be felt by the finger passed into the wound. The treatment was the same, sutures being passed and tightened as soon as bleeding ceased. He was enabled to return to work, well, in less than three weeks.

In remarking on these two cases, Dr. MacEwen points out that the antiseptic treatment enables a careful examination of the wound to be made with the probe or finger in safety, while in the first case a probable source of fatality was removed. This he claims as an advance in the surgery of these cases instead of the ordinary plan of not touching them, and thus "groping in the dark" in the after-treatment.

Case III.—A lad, aged seventeen, was stabbed in the abdomen, a knuckle of uninjured intestine being held between the lips of the wound. The wound was injected, sutures passed and tightened after the bleeding ceased, and lead and opium given internally. In ten days he was well enough to desire to get up, and the wound had healed; but he was kept quiet for three weeks.

Case IV.—A man, aged twenty-eight, with an abdominal wound of three inches, and another of one inch, the former evidently perforating the intestine. The same surgical treatment was adopted, along with morphia suppositories, the bowels being kept quiet for a fortnight. In a month he was well and strong.

[We have seen similar cases treated antiseptically in Edinburgh with equally good results, and think that Dr. MacEwen is right in advocating careful examination with antiseptic precautions, in preference to the usual treatment recommended in the surgical textbooks.—*Ref.*] *London Medical Record*.

GRAS ON MICROSCOPIC EXAMINATION OF BLUE LINES ON THE GUMS SUPPOSED TO BE DUE TO LEAD-POISONING.—*La Revue Médicale* for April 12, 1875, quotes a paper by Dr. Gras on this subject from the *Archives de Médecine Navale*. He insists strongly that the lead-line is no mere deposit of that metal in or on the epithelial cells or connective tissue of the gum. It is due to a transformation of a soluble salt of lead into a sulphide of that metal during the slow circulation of the blood in the very minute capillaries of the gum. He says the demonstration is exceedingly simple, and almost painless. When we are in doubt whether a given blue-line on the gum be due to lead or not, we should excise a fragment of the gum containing the line with a fine sharp scalpel or the point of a lancet, wash it with a camel's-hair pencil, and add a drop of glycerin;

if necessary, flatten it out with needles, and examine it under the microscope with a low power. If the line be due to lead, in the midst of the normal tissues of the gum we shall find capillaries injected, filled and obstructed by blackish granules. These capillaries are in loops, or semicircular, or like double hooks, the outlines varying somewhat according to the section. In very old lead-lines the capillary walls are less evident, and their outlines somewhat indistinct. If a piece of buccal mucous membrane be excised, we should use carmine with glycerin, and a little dilute acetic acid, which shows the mucous papillæ, and the capillary net-work. He suggests that in fatal lead-colic the intestinal capillaries and the nerves of the solar plexus should be examined in the same way for lead. [The Reporter does not know to whom the credit of the suggestion belongs, but it has long since been proposed to examine the lead-line by a simple microscope, or, in other words, a one- or two-inch biconvex lens; when, if in the capillaries, as the true lead-line is, it will be seen clearly to be dotted, and to follow the course of the vessels. It will thus be seldom necessary to remove any of the gum in the living subject; though after death this suggestion of M. Gras may doubtless be of considerable use].—W. BATHURST WOODMAN, M.D., in *Lond. Medical Record*.

TREATMENT OF DISEASE OF THE HEART.—Dr. J. Milner Fothergill, in concluding an article in the *London Lancet* of May 29, says,—

Of preventive measures nothing can be said at present; but of measures palliative or curative the following brief summary may be made:

1. That it is of the utmost importance in the treatment of primary disease of the heart to reduce to a minimum the calls upon that organ. Consequently, light labor alone must be attempted; and rest in bed is often very desirable at the commencement of a course of treatment, as well as at intervals afterwards.

2. Frequently much relief can be afforded when dropsy is present by unloading the distended venous system. Brisk catharsis gives great relief, and does not depress the patient, as might be apprehended.

3. In all cases the heart must be acted upon directly by agents which increase the vigor of the ventricular contractions, of which digitalis is the chief. This agent may be given uninterruptedly for years without any so-called cumulative action, if the cases are properly selected. If given in improper cases, unpleasant consequences may follow its administration.

4. It is also very desirable that the nutrition of the heart be maintained by good food and iron in addition to the means mentioned above. Improvement in the general condition facilitates the action of the special remedies.

By combination of these measures, adapted to the needs of each individual case, much may be done in cases of primary disease of the heart. What are the indications for treatment and the measures to be resorted to in cases of secondary affections of the heart—that is, where the heart-failure is due to some primary ailment standing in a casual relationship to it—will engage our attention on some future occasion.

PLANAT ON PICROTOXINE AS A REMEDY FOR EPILEPSY (*London Medical Record*, May 26, 1875).—To M. Felix Planat's work on this subject has been awarded one of the premiums under the foundation of the Prix Barbier at the disposal of the Paris Academy of Medicine. M. Planat's researches, as recorded in his *Recherches physiologiques et thérapeutiques sur la Picrotoxine*, have been directed to the endeavor to find some remedy for epilepsy. To this end he proposes, not as a specific, but as a really useful medicine, picrotoxine, the active principle of *cocculus indicus*. He administers it in the following way: *cocculus indicus*, 200

grammes; alcohol, 1000 grammes; allowed to macerate for three weeks. Give two to three drops of the alcoholic tincture, increasing from two drops daily, then diminishing. The treatment should be prolonged for several months, or even a year. According to M. Planat, the anatomical seat of epilepsy is in the spinal marrow; the contraction of the sanguineous capillaries brings on a bulbar ischæmia, and this ischæmia in its turn produces convulsions. The picrotoxine acts on the bulb; it is a convulsant poison: therefore, in accordance with the axiom "*similia similibus*," it will cure epileptic convulsions.

The commission appointed to adjudge the Barbier prize, however, guarantees neither M. Planat's theory nor his experiments, although he asserts that he has by the administration of picrotoxine brought on convulsions, with foam at the mouth, in a rabbit, a kitten, and in animals of a lower organization, as frogs, crabs, and even snails and slugs. Neither does the commission guarantee the veracity of the numerous cures with which M. Planat credits himself. The Academy, however, has shown its estimation of meritorious work carried on through twelve years, by the award of a premium of five hundred francs to M. Planat.

GLEANINGS FROM OUR EXCHANGES.

THE PATHOLOGY OF PROGRESSIVE MUSCULAR ATROPHY.—Dr. Troisier recently brought the following case to the attention of the Société Anatomique of Paris: In a male, 27 years of age, loss of motor power with atrophy of the muscles of the upper limbs began fifteen months before death, the muscles of the right shoulder being first affected; the fatal termination was due to involvement of the intercostals and diaphragm. Examination showed simple atrophy, without loss of striation, of many of the fibres of the various muscles, with an increased amount of interstitial tissue and fat. Both roots of the spinal accessory and the root of the hypoglossal nerve were atrophied, gray, and translucent; the microscope showing simple atrophy of their fibres with preservation of myeline. Similar changes were noticed in the eight upper anterior spinal roots, most marked on the right side, the posterior roots being intact. Examination of the spinal cord showed almost entire absence of the characteristic large branched nerve-cells in the anterior cornua; scanty granular masses represented those which had disappeared. These changes were limited almost entirely to the cervical region of the cord.

Dr. Troisier thought that the disease had arisen in a sub-inflammatory condition of the gray matter itself, the atrophy of the cells in the anterior cornua being the primary lesion and the changes in the nerves secondary. The change in the muscles was one of simple atrophy, accompanied by the multiplication of nuclei of the sarcolemma. Dr. Charcot remarked on the value of the case as showing the connection between lesions of the anterior cornua and progressive muscular atrophy. —*Lancet*, May 29.

TREATMENT OF ACUTE NASAL CATARRH, ETC., BY THE TINCTURE OF THE CHLORIDE OF IRON.—J. S. Prout, M.D. (*New York Medical Record*, June 12), recommends the use of tinctura ferri chloridi in large doses in the treatment of coryza. There is often an abortive action on the inflammation. In half an hour relief may be felt, which may remain permanent, or a cure may require a few repetitions of the dose.

Dr. Bull writes to Dr. P. as follows: "I have used the tincture of the sesquichloride of iron quite frequently in cases of recent or incipient nasal catarrh, what is ordi-

narily called 'a cold in the head,' and almost invariably with a rapid beneficial effect. I give it as soon as the patient complains of the sense of fullness in the nose and head, in doses of from ℥xx to ʒss, and repeat every hour. Usually, I have not been obliged to give more than four or five doses, and sometimes not more than two. I have taken it myself, and always with good results. But it must be given early; otherwise it fails in producing the desired effect. I have not noticed any bad effects from its use in such frequently repeated doses."

Dr. N. B. Sizer has also written to Dr. Prout, giving his experience with the remedy. He has noted twenty-eight cases in which the iron was used, and twenty-five of these were cured in from twenty-four to forty-eight hours.

"In those not cured," Dr. S. says, "the catarrhal inflammation was modified somewhat, but the disease ran its usual course. There was no personal idiosyncrasy, so far as known, to interfere with the curative results in these cases. The dose varied from three to thirty-five minims, with an equal amount of syrup or glycerin. The thirty-minim dose has been given to an infant, with wonderfully quick effect; done tentatively, however, and not as a usual thing."

The tendency of the iron to constipate may be very much lessened or entirely prevented by the addition of three or four drops of the tincture of belladonna to each dose.

EXCISION OF THE HIP-JOINT AND REMOVAL OF THE WHOLE OF THE ACETABULUM WITH A PORTION OF THE DORSUM ILII (*Lancet*, May 29).—A boy of 11, with a family history of phthisis, received a kick on the hip while at play. Lameness followed this, which was treated for some time by rest and extension. After some months he was improved, and treatment was discontinued. His health became worse, suppuration was established, and the hip became riddled with sinuses. He was admitted to the Southport Infirmary, under the care of Mr. George A. Woods, a year and ten months after the accident, in an extremely emaciated and exhausted condition, suffering from hectic. There were various sinuses above the great trochanter, and one large crescentic one extending from a little below the great trochanter four inches to the dorsum ilii. Dead bone could easily be detected with a probe. Chloroform having been given, a T-shaped incision was made for about six inches over the centre of the great trochanter, the limb was forcibly adducted and rotated inwards, and the head of the bone exposed to view, lying dislocated on the dorsum ilii. The head of the bone and the parts below for an inch and a half were then removed with the saw, and the acetabulum and adjoining parts being found diseased, these as well as a portion of the dorsum ilii and ischium were removed by the gouge. The case progressed satisfactorily for a considerable time, but the patient died six months later of kidney-disease. On examining the joint after death, the wound was found entirely healed, and there was good motion. Shortening, four and a half inches.

NEUTRALIZATION OF HYDRATE OF CHLORAL BY CARBONATE OF SODIUM.—M. Oré states that the addition of two drops of a ten per cent. solution of carbonate of sodium to fifteen grains of chloral dissolved in a drachm of water will not only neutralize the acidity of the chloral but will render the solution alkaline. This alkaline solution hinders the coagulation of the blood instead of occasioning it, and can therefore be injected into the veins without any risk of producing embolism. M. Oré strongly recommends this method of employing chloral as a means of producing anæsthesia in surgical operations.—*Practitioner*; from *Bull. Gén. de Thérap.*, February, 1875.

MISCELLANY.

A SIMPLE METHOD OF PREVENTING MASTURBATION IN CHILDREN.—Dr. Porro (*Riv. di Medicina, Chir. et Terapeutica*, de Soresina) writes that he was consulted about a child, aged four and a half years, who was furiously addicted to onanism. It occurred to him that if the prepuce were closed by transfixing it by a gold ring,*—such as are worn in the ears by girls,—the performance of the act would be hindered. This method proved efficacious, and the health of the child, which had been enfeebled, was soon re-established. The presence of the ring did not render erection painful. The author adds that this means may be applicable to girls by thus transfixing the labia majora, joining them throughout their superior and middle thirds.—*Le Progrès Médical*, April 10, 1875; *St. Louis Clinical Record*.

BLOODING A KING.—The following extract from "The Greville Memoirs" gives a vivid idea of medical practice in 1820:

"February 4.—The new king (George IV.) has been desperately ill. He had a bad cold at Brighton, for which he lost eight ounces of blood; yet he afterwards had a severe oppression, amounting almost to suffocation, on his chest. Halford was gone to Windsor, and left orders with Knighton not to bleed him till his return. Knighton was afraid to bleed him. Bloomfield sent for Tierney, who took upon himself to extract fifty ounces from him. This gave him relief; he continued, however, dangerously ill, and on Wednesday he lost twenty ounces more. Yesterday afternoon he was materially better for the first time. Tierney certainly saved his life; for he must have died if he had not been bled."

A HINT FOR SMOKERS.—Reference is made in the last number of *Nature* to a property which cascarilla bark has in modifying the physiological effects of tobacco-smoking. The addition of a few very small fragments of the bark will, it is alleged, in most cases counteract the nauseating effects of strong tobacco, although if such a mixture of tobacco and cascarilla bark be smoked to excess, it will sometimes produce loss of appetite, and thirst, with vascular and nervous depression.

FOR COLD IN THE HEAD.—Hamilton recommends to mix carbolic acid, 10 drops, tincture of iodine and chloroform, each $7\frac{1}{2}$ drops. A few drops are poured into a test-tube and heated over a spirit-lamp; when it begins to evaporate it is placed under the nostrils. Two minutes afterwards, the operation is repeated. Sneezing at first results, but relief soon follows.—*Journal of Applied Chemistry; Physician and Pharm.*

A MEDICAL man, who is posted in all the sciences, and who has lately cured a very bad case of "fits," considers it an illustration of the Darwinian doctrine of "survival of the fit-ist."—*Danbury News*.

THE *Irish Hospital Gazette* is dead. Immediate cause, absorption into the *Dublin Journal of Medical Sciences*; predisposing cause, probably, lack of subscribers. *Requiescat in pace*.

ONE thousand nine hundred and seventy-four patients were treated in the Pennsylvania Hospital, exclusive of the insane department, during the last year.

MESSRS. BRYANT AND DURHAM have been appointed lecturers on surgery at Guy's Hospital, in place of Messrs. John Birkett and Cooper Foster, resigned.

DR. TILT, of London, has been made a "Knight of the Crown of Italy" by the Italian Government.

THE cinchona-cultivation in Jamaica is said at last to be thoroughly assured of success.

FEVER without ague is no great shakes, so says a malarial exchange.

NOTES AND QUERIES.

MOUNT SAVAGE, ALLEGANY COUNTY, MD., June 16, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I beg leave to ask an answer and explanation of the following question: "Is the temperature of an inflamed part greater than the ordinary temperature of the body?" I have asked several physicians this question, and have received answers both in the affirmative and negative; so, as a last resort, I ask for an explanation through the columns of your journal. For my own part, I should say that it was greater, and give my reasons for so thinking from the following facts:

1. The arterial blood supplied to an inflamed limb is found less warm than the focus of inflammation.
2. That the venous blood, returning from an inflamed limb, though found less warm than the focus of inflammation, is found warmer than the arterial blood supplied to the limb.
3. That the venous blood returning from an inflamed limb is found warmer than the corresponding current on the opposite side of the body.

Now, I would ask, Does the temperature of the inflamed part exceed that of the left ventricle of the heart, or the temperature under the axilla? If not, is it on account of the increased flow of blood which an inflamed part receives, and which neutralizes, to a certain degree, the increased heat which arises?

I beg you will pardon my troubling you; but, so far, I do not feel satisfied with the explanations I have lately received.

Yours, etc.,

MEDICAL STUDENT.

OBITUARY NOTICE.

DR. J. P. ANDREWS, a prominent physician of Colerain, Lancaster County, Pennsylvania, was found, on the 7th inst., lying in his buggy unconscious, with blood flowing from his mouth and nostrils, and died in a very short time after being taken out.

Dr. Andrews was an accomplished physician, quite a noted local historian, and is also said to have been one of the best botanists in the State. At the time of his death, he was in his 56th year.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 15, 1875, TO JUNE 21, 1875, INCLUSIVE.

HASSON, A. B., SURGEON.—Granted leave of absence for twenty days. S. O. 121, Military Division of the Atlantic, June 15, 1875.

KOERPER, E. A., ASSISTANT-SURGEON.—Relieved from duty as Attending Surgeon, Detroit, and assigned to temporary duty at Fort Wayne, Michigan. S. O. 124, Military Division of the Atlantic, June 19, 1875.

SKINNER, JOHN O., ASSISTANT-SURGEON.—Assigned to duty at St. Augustine, Florida. S. O. 79, Department of the South, June 14, 1875.

* This is simply a revival of the operation of infibulation, practised by the ancient Romans upon gladiators during their training for the arena.

SATURDAY, JULY 3, 1875.

ORIGINAL COMMUNICATIONS.

LIVING ISSUE.

BY THEODORE H. SEYFERT, M.D.

LAW, like every other science, is progressive, and adapts itself readily to those changes which intellectual development points out for its equitable administration. The common law, for instance, is said to be the accumulated wisdom of a thousand years. It grows by time, and is strengthened by the added wisdom of succeeding generations. But were reason to remain silent before authority, good or bad, we would soon be in as ridiculous a position as if the laws of the Medes and Persians were our unalterable code.

Legal reports are full of what are called "overruled cases," which simply means that judicial interpretation is not infallible, and that a case decided one way may, upon subsequent examination and reflection, be differently decided. There is such a thing as *bad* law, as there is such a thing as an illogical conclusion; and a decision that is not based upon correct reasoning, although it may have the grandeur of "authority" about it, is faulty, and liable to be "overruled;" but in all cases where the "authorities" are supported by reason, they stand, as they deserve to.

The Dover case (referred to at length by Prof. Reese, in his article on "What Constitutes a Live Birth?" in the *Medical Times* of the 20th ult.) is one of a character rare in our jurisprudence, and might very properly have been treated as the first of its kind, deserving an exhaustive examination of the reason and the spirit of the law bearing upon the subject, independent of the decisions in previous cases of a similar character. In determining the question of what is *living issue* within the meaning of the law relative to the "tenancy by courtesy," we must have a *reasonable* interpretation of the words "born alive," and to assist in so interpreting these words is the object of this paper.

Among the canons of construction laid down by Blackstone is this: "Words are generally to be understood in their usual and most known signification; not so much regarding the propriety of grammar as their general and popular use." The word *born* is understood by all, and as it is so understood the law understands it. It is the act of coming into this life, into communication with the outer world; and until this is accomplished the being is not born. The condition in which it comes is next to be considered; it must be *born alive*. Is it not reasonable to suppose that what the law contemplates in this term is not a partial or a qualified life, but an absolute life? that is to say, that the issue when born must be possessed of *all* conditions necessary to existence? Keeping in view the common-sense canon of construction, let us refer to Prof. Reese's paper, in which I find it stated that in establishing the claim of a *tenant by courtesy*, "what the

law requires is simply *proof of life*,"—not evidence to prove that the issue possessed an independent existence, but simply that it lived after its complete extrusion from the mother. Neither does the doctor consider the amount of life as worthy of special attention, for he declares that "all we contend for is *life*, not the amount or quantity of life, but the fact of life."

The word in its general sense refers to "that state of animals and plants, or of an organized being, in which its natural functions and motions are performed, or in which its organs are capable of performing their functions" (Webster). This is the popular acceptance of the word, and in this sense we must regard it. The word is also used with reference to specific stages of existence: thus, we say cell-life or germ-life, embryonic life, foetal life, in order to distinguish them from one another as well as from that kind of life now under consideration, which we will term independent life. The principle of life mysteriously contained in the germ is the same life continued on in man; and if the presence of the vital principle is *all* that is contended for, then the vivified ovule itself, or the living embryo suddenly thrust forth from the mother at any period of its career, may justly be regarded as *living issue*. But something more than "proof of life" is demanded. The amount or quantity of life is a matter of importance, as the following quotation will show. Every legitimate infant *in ventre sa mere* is considered born for all beneficial purposes (that is, for those relating to its own interests), but "as it respects the rights of *others claiming through the child*, if it be born dead, or in such an early stage of pregnancy as to be *incapable* of living, it is to be considered as if it had never been born or conceived." (Blackstone, Book I. *130, note.) Here the amount is measured in pointedly excluding the child which, *though it is not dead*, is incapable of living.

"To discuss metaphysical subtleties on the subject of life before a court and jury" might, under certain circumstances, "befog and confuse plain common-sense jurymen;" but I trust that they could readily be made to comprehend the difference between the amount of life comprised in one individual and in the 800,000 composing the population of our city; or that the existence of a State depends upon the number and the varied duties of its people. In other words, they could be made to appreciate the difference between the life of one cell and that of the countless number composing the body,—between the life of a tissue or organ and that of the being of which it is only a part. We cannot declare a person is alive because the microscope reveals the fact that cell-life is not yet extinct; and I am confident that even an expert witness would hesitate long before admitting the existence of an individual when it depended upon such microscopic evidence.

Under ordinary circumstances, the longer a person is completely submerged the less life do we find in the body, and the chances of resuscitation are correspondingly diminished. Our restorative meas-

ures consist in stimulating cell-action by artificial respiration, warmth, etc., and if their use is not attended with success, then we assert that the individual is dead; not because life has entirely departed from the body, but because vitality has diminished to such an extent that we cannot recall into activity those functions upon which the life of the individual is dependent. Thus, a newly-born babe may be said to be dead if it is incapable of exercising those functions without which life cannot continue. Recognizing this fact, the counsel for the plaintiff in the Delaware trial (Stout *vs.* Killen) alleged that the life in the child was merely a prolongation of foetal existence; but the defence held that this doctrine was untenable, and by a dexterous use of the word "life" succeeded in befogging the jury to such an extent that they sustained the claim of the defendant, notwithstanding the learned judge's efforts to lead them to a right conclusion.

A child born without the ability to breathe is not alive in the meaning of the law. Air is indispensable to life; and, says Dr. Draper, "In this particular the Scriptures have summed up the deductions of modern physiology in a single line,—no metaphorical expression, but the simple assertion of a truth: He 'breathed into his nostrils the breath of life, and man became a living soul.'" It was originally held that crying was a necessary proof of a live birth, thus showing that, in the early life of this law, respiration was needed to indicate life. But afterwards it was said by a learned lawyer, Sir Edward Coke, that it *need not* cry, "for perchance it might be born dumb." This, however, does not exclude the conclusion that it must respire, and nowhere is it hinted that respiration is unnecessary. The excuse for not making crying an obligatory proof relates not to the lungs but to other organs,—those of the voice,—and there is no reason to believe that the law now does not require the child to breathe before it can be called "living issue." Unless a placenta is developed, the embryo lives and dies as an embryo, for its further progress is arrested, and it cannot pass into that stage of existence known as foetal. And so with the foetus: it must live and die as a foetus, and can never pass into an independent life without the use of its lungs.*

In this connection, "profound and learned theories upon the difference between intra- and extra-uterine life" might very properly be studied by the "ingenious counsel" and explained to the jury, who will be called upon to decide whether or not the child had a separate and independent life; whether or not it was alive as a being of this world.

Foetal life is a dependent life. The elaboration of the blood which is essential for its maintenance is performed through the instrumentality of the placenta,—the lungs of the foetus,—and this involves a different arrangement in the route of the circulation from that which exists when independent life is established and the individual elaborates its

own blood. From the placenta arterial blood passes to every part of the foetal system, distributing its oxygen and nutritive elements to every tissue. As venous or impure blood it is returned to the placental surface, where, by endosmotic action, it is relieved of its carbonic acid and again supplied with oxygen and nutriment from the blood of the mother. It is unnecessary to refer to the anatomical peculiarities of the foetal circulatory apparatus further than to say their existence is owing to the important fact that the foetus must receive its breath and nourishment through the placenta. During this period the lungs are two solid, almost impervious, and utterly useless organs, receiving no blood except that required for their nutrition. Yet they are compactly stowed away and carefully nourished until the time arrives when the child's existence will depend upon their coming promptly to its rescue.

When the child is born and separated from its mother, the whole current of the circulation must be changed, otherwise it cannot live. The blood can no longer go to the placenta, for the source whence it received its breath is cut off, therefore it speedily seeks another channel, and passes in large quantities to the lungs. Now it is that these organs are called upon to fulfil the purpose for which they were created,—that of substituting a function of the placenta, and establishing in the being an independent life.

An independent life, then, can be said to exist only after the child has come into actual relationship with the world through the respiratory function. Unless air enters the lungs, its condition is precisely the same as it would be in utero with its cord tightly ligated. The child does not necessarily die upon the instant, for during labor it may live for five minutes after the cord has ceased pulsating (Barnes). It would be interesting to know how long life can continue cut off from placental and aerial respiration. Dr. Barnes states that a living child has been removed from the dead mother, by the Cæsarean operation, thirteen minutes after the maternal circulation had ceased. And instances where living children were extracted in this way within ten minutes after the mother's death are not rare. It is probable that no part of the foetus is supplied with pure arterial blood, and on this account it may be able to live longer shut off from the air than it would be if deprived of oxygen after respiration was established.

But it must be remembered that this is not independent life, for it is still living upon that which it has received from the mother. As yet, the child cannot participate in a single interest common to mankind; there is nothing of this world that it can partake of, not even the atmosphere we breathe; and it is as dead to all such interests as if it were still unborn. It is a prolongation of foetal life, likened by the plaintiff's counsel in "the Delaware case" to the momentum imparted to a piece of machinery and retained for a while after the impelling power had been withdrawn. A better illustration, however, might be found in a locomotive which, with steam in the chambers and fire in the furnace, escapes

* In confesso est respirationem a vita et vitam a respiratione separari non posse, adeo ut vivens omnino spiret et spirans omnino vivat.—GALEN. Life means respiration; not to have breathed is not to have lived.—CASPER, vol. iii. p. 33.

from the depot without fireman or tender. Although it is cut off from the source of its supplies, it will continue to run so long as a sufficient amount of steam is generated by the fire within it. It is alive, so to speak, but in the condition of a child that cannot breathe. No fuel can be supplied, the fire must go out, motion cease, and the engine remain an inert mass upon the road.

With the exception of respiration, there is no phenomenon we can adduce to show the difference between fetal and independent life; and this is one of such a positive character, and attended with such prominent physiological changes, that I cannot do otherwise than accept the statement of Drs. Ramsbotham and Lee, "Nothing less than breathing can establish the fact of a live birth." I do not understand these gentlemen as admitting that a child is dead because it does not immediately breathe after its birth. "The fallacy of this opinion" is undoubtedly shown in the case quoted by Dr. Reese, where the infant commenced breathing after restorative measures were used. But in the Delaware case it was otherwise, for the child failed to respond in any way to the remedies applied by skilful physicians. And may we not argue that their want of success exhibited "the fallacy of the opinion" entertained by those who declared it to be alive?

Is the *beating of the heart* a satisfactory evidence of life, sufficient to establish its existence both physiological and legal? Temperature and muscular movement are also indicative of the presence of life, but, confessedly, not always reliable. Sometimes the fibres of a muscle have been noticed in rhythmical motion, so that "a sensation as of the pulsation of an artery was plainly felt" when one's fingers were pressed upon it (Carpenter's Phys.). Dr. Brown-Séquard "has observed some curious rhythmical movements, from five to twenty in the minute, in the intercostals, diaphragm, and some of the muscles of locomotion, after death." How readily an inaccurate observer might mistake this motion of the intercostals for that of the heart! and how much more easily one may be deceived when searching for that which is ardently desired!

By an English court, many years since, the tremulous motion of an infant's lips, in the absence of all other indications of life, was considered sufficient evidence to establish the fact of a live birth. But that decision would not hold good now, for we know that muscles do not lose their irritability immediately after death. And the heart itself,—the most irritable of muscles,—may it not throb after an individual has ceased to live? In some instances the heart will continue its pulsations long after the animal is dead. In animals killed with conium it will beat for many minutes after death (Dr. William Curtis, in *New York Medical Record*, May, 1875); and the frog's heart, even when it is cut into slices, will continue its rhythmical motions. It is true that the life of the body is dependent upon the functional activity of the heart in common with that of other organs; but does it follow that it must stop beating before we can say, "He is dead"? The hanging murderer is not cut down until the heart-

beat is no longer detected; but is he—the murderer—not dead before this?

One would not be apt to regard a headless body as a living being, yet it is on record that the heart of a decapitated criminal was seen pulsating twenty minutes after death, and continued with perfectly regular action, at the rate of forty-four pulsations in the minute, for an hour (Carpenter's Physiology). Was this "a satisfactory evidence of life sufficient to establish his existence, both physiological and legal"? Many cases might be cited having a tendency to lessen our faith in the reliability of this sign of life, but none of them are so remarkable as the one which I will give on the authority of my friend Dr. Renel Stewart, of this city, who has promised to report it to the *Times*.

In July, 1872, at 10 o'clock P.M., he was called to a neighboring house, in which he found a gentleman pulseless, cold, and stiff. The jaw had dropped, the eyes were fixed; in fact, every indication of death was present, and, as a matter of course, the doctor pronounced him dead. Happening to place his ear over the cardiac region, he detected the beating of the heart. There was no mistake in this, for by manipulating the chest its action became stronger, and he succeeded in obtaining a radial pulse. Cadaveric rigidity had set in, and he could raise the entire body by its head. Dr. S. visited the house at intervals until seven o'clock in the morning, and at each visit ascertained that the heart *was still beating*. At eight o'clock it ceased to beat, relaxation had occurred, and symptoms of decomposition were plainly discernible.

The points I wish to illustrate by this article are as follows:

1. The law, reasonably interpreted, demands more than "simply proof of life" in the issue before it can be called living.
2. That the proof of respiration was originally necessary to establish a live birth, and that there is no evidence to show that this proof is not still required.
3. That until respiration occurs the life of the child must necessarily be considered as fetal.
4. That the law, reasonably interpreted, cannot recognize a fetus as living issue. It must be born with a possibility of inheriting, which possibility fails if it lacks at its birth the functions of independent being.
5. That respiration is the only evidence of an independent life.

SYPHILITIC SEMEN.

BY ISAAC SMITH, JR., M.D.

I ASK the indulgence of the readers of the *Times* for the further consideration of the question, Is semen of a syphilitic patient a vehicle of infection? which was raised by my report of a case in the November number of the *New York Medical Journal*, page 499. This question, which has been so ably, impartially, and scientifically discussed by R. W. Taylor, M.D., in the pages of the *Times*, February 27, demands all the light that can be thrown upon

it, and that is available and germane for its proper illumination, and this is my apology for this communication.

In my original paper, some points, although thoroughly weighed in my own mind, were inadvertently omitted, which I will try to introduce now; should I fail, however, to do so satisfactorily, I shall be pleased to answer any question pertinent to the subject.

My patient is of a nervo-sanguineous temperament, and hence was often under inspection. He was ever on the alert for breakers. This causes me, naturally enough, it must be conceded, to speak with more assurance than I should be justified in doing in ordinary cases of syphilis. His penis was normal in every particular prior to infection. I have never seen any solution of the continuity of any part of it, or of the chancre-cicatrix, other than the initial lesion and the later chancre alluded to. He had "travelled" so much previous to marriage that no stress could be laid upon the ardor of being "newly married." I apprehended no danger of abrasions, consequently no "necessity to warn" my patient of the possibility of infection by such accidents.

He never had mucous patches or lesion of any of the mucous surfaces until nearly two years after the date of invasion, and then had what was described by me as a urethral chancre, a re-inoculation as I considered it at the time. I have not the slightest evidence that any abrasion of the penis occurred; hence, no point that the wife was syphilized by inoculation of his blood. If an abrasion occurred, it must have been microscopical. It is, under the circumstances, obviously impossible to say positively and finally that he did or did not thus infect her. What stretch of the imagination or of the truth, I submit, does it require for me to sum up that he did not thus infect her, when I only have a possibility, but not a probability, of such inoculation? If that source of contamination has been eliminated, it brings us again to the original "hypothesis," that of syphilitic semen.

Now, then, if the semen of a syphilitic man will impregnate a healthy ovum, and, later, that fertilized egg will infect the mother, does it not seem logical as well as reasonable that the syphilitic germ was present in the semen? and in this case, that element being present, why could it not contaminate a "uterus very susceptible to the transmutation of fluids"? Surely the mathematical proportions of a spermatozoon could offer no very insurmountable obstacle to transudation, and as surely it seems that it might follow where a blood-disk leads into the circulation.

The following lines extracted from a lecture on life and on vital action, by Prof. Lionel S. Beale, M.A., F.R.S. (*London Lancet*, May 15, 1875), may not be uninteresting in this connection:

"The bioplasm of a human spermatozoon, which, perhaps, hardly weighs as much as the one-hundredth part of a single red blood-corpuscle, may stamp with unmistakable individual characteristics several tissues and organs which in their fully developed state weigh many pounds." Again he

says, "Here is one of the very smallest living particles carrying the most extensive powers,—powers which may reach to every tissue in the being that is to be formed. It is, nevertheless, suggested that the spermatozoon may be composed of millions of particles, one or more having been detached from every component element of the tissues of the parental organism. But this is not all; for every one of millions of spermatozoa must be considered as having been formed in the same way."

From what I have written upon this case, is a physician warranted and blameless (should subsequent infection follow) in advising a syphilitic patient, who presents no visible signs of the disease, that the only danger of infecting his wife will occur either from pregnancy or abrasion of his penis? May I ask Dr. Taylor if he would feel secure in so teaching a patient?

FALL RIVER, MASS., June 8, 1875.

A COMPLICATED TWIN LABOR.

BY H. G. LANDIS, A.M., M.D.,

Niles, Ohio.

AT 11.45 P.M. of November 5 I was called to deliver Mrs. S., æt. 29, fourth pregnancy, in labor since 8 A.M. An illiterate midwife in attendance had become alarmed at an unusual delay,—viz., the child's head had been born for an hour, and there was as yet no inclination of the body to follow, although the pains were powerful. On introducing a finger into the vagina in search of an axilla, a second head was found on the pelvic floor, in immediate contact with the thorax of the first child, and in a directly transverse position; the anterior fontanelle being nearly opposite and below the right tuber ischii, the posterior fontanelle a little below the left tuber. The anterior and already born head was covered by very thick membranes, which were divided by scissors and peeled back. During several pains this head was observed to be immovable, not inclined to yield to traction; neither could the posterior head be pushed upwards, but was perceptibly driven towards the outlet. Following this indication, two fingers were inserted in the vagina as far as possible, and the perineum drawn down during a pain; at the same time the anterior head was pulled forwards and up over the pubes. The second pain brought the posterior head so far down that it could be seen with the same membranes as tightly stretched over it as with the first head. These were again divided, and the succeeding pain drove the second head through the vulva; the rest of the child followed at once, and was followed by the anterior child. The placenta came away with light traction in six minutes. It was large, with two separate cords; the chorion and amnion were common. The children were both female, of the same size, and weighed each five pounds. The second head measured four and a half inches in the occipito-frontal and three and three-quarter inches in the bi-parietal diameter. In passing down it had pressed a groove in the chest of the first child, the sternum being flattened against the

vertebræ. If the vagina had been less capacious, dismemberment and evisceration of the anterior child might have been necessary. The second child is living and hearty at this date, and the mother made a good recovery. This accident seems to be rare, and, indeed, incredible if the case were under professional guidance from an early period of labor. Neither Cazeaux nor Meadows mentions it; Churchill records similar cases, and Leishman mentions it fully.

POISONING BY RHUS RADICANS.

BY S. W. MORRISON, M.D.

I HAVE used with entire satisfaction for some three years or more, in the treatment of the eruptions caused by rhus radicans, the prescription which I give below. In many trials I have never seen it fail, no matter in what stage of the disease it has been applied, to relieve and check the inflammation immediately. I have never known it to be used by any other person; and as this is the season when abundant opportunity is afforded for trial, I hope it may be made, and that we may have the results through the *Medical Times*. I do not know that the sulphite of sodium is of any use in this prescription, but I know that it will not be of much use without the carbolic acid.

R Acid. carbolic., f3ss;

Sodii sulphis, ʒiij;

Aquæ font., f3vj.—M.

S.—Apply constantly to the parts affected, on bandages of muslin.

NOTES OF HOSPITAL PRACTICE.

KING'S COLLEGE HOSPITAL, LONDON.

SERVICE OF MR. JOHN WOOD, F.R.S.

Reported by JOHN B. ROBERTS, M.D.

PLASTIC OPERATION FOR THE RELIEF OF EXSTROPHY OF THE BLADDER.

A BOY, aged about two years, was the subject of a congenital malformation of the pubes and bladder, which, on account of a deficiency of the symphysis and rami of the pubes, allowed a hernial protrusion of the posterior wall of the bladder through a fissure extending nearly up to the umbilicus. The back of the bladder, pushed forward by the pressure of the intestines behind, forms a tumor in the hypogastrium, which is red, because the mucous membrane of the internal surface of the bladder is seen as the viscus is everted. If the penis be raised up, the internal orifices of the ureters are seen as they enter the bladder, and the urine can be observed dropping from them. Whenever the child cries, the pressure of the diaphragm causes the bladder to protrude further, and thus the tumor increases in size.

From the friction which must necessarily be received from the clothing and limbs of the child, the mucous membrane has become inflamed, and is secreting mucus and pus. This causes a great deal of pain, which is aggravated by any movement; and another source of greatest discomfort is the continuous escape of urine upon the surrounding parts.

For these reasons an attempt shall be made to relieve the child by a plastic operation, whereby the tumor shall be covered by skin to prevent friction, and subsequently the epispadic condition met by taking integument from the scrotum.

The tumor is covered by taking first a curved tongue-like flap from the belly, above the everted badder, and this is turned down with its epidermic surface towards the mucous membrane of the bladder, so as to cover the opening through which the protrusion occurs. Then a flap is dissected from the groin on each side, and these two flaps drawn towards the middle line, where they are brought together over the *turned-down* superior flap. By this method there are placed three thicknesses of integument over the abnormal opening, which not only relieves the sensitive mucous membrane of friction, but affords support, and prevents the protrusion of the bladder by the intra-abdominal pressure. In some cases the success has been so great after this operation that there has remained only a small opening, and the patient has been able to go all night without wetting the bed.

In making the superior flap, care must be taken that it be sufficiently long to allow for shrinkage, for it is wanted to come down nearly, but not quite, to the penis; another precaution is to cut very carefully when dissecting up its base, for the skin and belly-wall are thin just above the bladder, and the knife, by an unlucky stroke into the peritoneum or subperitoneal tissue, may cause much damage by rendering the patient liable to peritonitis. Not that the mere wound of the peritoneum is to be feared so much, but the urine, with which the parts are apt to come in contact during the progress of the case, will cause inflammation of the peritoneal membrane and insure a fatal result, as has happened when sufficient attention has not been paid to this source of danger. This flap depends for its vitality on the corners running alongside of the bladder, and care should be exercised in cutting here, in order that sufficient nutrition be allowed to prevent sloughing.

The flaps taken from the groins are somewhat lancet-shaped, but with a blunt point, however, and get their nourishment from the superficial branches given off by the femoral artery in the neighborhood of Poupart's ligament.

The three flaps are now dissected up, and it remains to place them in position by sutures. Before doing this, the parts are cleansed of clotted blood, and the bleeding entirely stopped by a sponge and cold water, because after the hemorrhage is arrested a gluey substance exudes, which sticks the flaps together like two pieces of wet paper, and thus prevents the urine being infiltrated between them. This is an important point in the operation.

The protruded bladder having been pushed back by the finger of the operator, the upper flap is turned down over the aperture (the flap has no hairs on it), and then the side-flaps drawn over it without being turned, so that there are two raw surfaces in apposition. Sutures are applied by passing four long pins through the opposed edges of the lateral flaps, including, as they are pushed through, the upper part of the superior flap, but not passing through it to the other side, for that would allow the urine to work its way between the flaps. All these precautions for keeping the parts as free as possible from contact with the urine are important, for there must be at times gushes of urine from sudden movement on the part of the patient. The pins are wrapped with a ligature twisted around like a figure 8, and passed from one pin to another.

It now remains to bring together the parts from which the skin-flaps were taken; and to do this the thighs are flexed, to relax the integument as much as possible.

The wound above is drawn together by hare-lip sutures, to afford as great support as practicable, and to endeavor to obtain immediate union, which, by the way, is not nearly so necessary here as below; but at the sides wire sutures are used, because of the fold of the groin interfering with the placing of the pins. If care be not taken in the proper disposition of the sutures at the corner, the urine will find its way through, and there will be left a sinus.

This is the eighteenth or twentieth case of congenital malformation of this kind that Mr. Wood has operated upon, and generally he has had excellent results from this mode of proceeding. Fatal issue may sometimes occur from disease of the kidney, induced by extension of inflammation from the mouth of the ureters to the pelvis of the kidney, and by the obstruction at the orifices of these ducts, as in one of his cases, where, after death, the autopsy revealed cystic degeneration of both kidneys.

After oil has been applied to the wound, the knees are tied together, with cotton between them, and a bandage passed around the shoulders and legs, in order to keep the little patient in a crouching position to relax the parts and prevent tearing out the sutures. This position shall be maintained more securely by propping him with pillows, and it will be necessary to keep him from crying or coughing; because the intra-abdominal pressure is increased by these acts and great strain brought upon the sutures.

When the child gets older, an attempt shall be made to improve the condition of the urethra by taking skin from the scrotum, after a modification of the operation devised by Nélaton for these cases. It will be better, however, to wait until the penis and scrotum are better developed.

TRANSLATIONS.

THE ACCIDENTS OF CONVALESCENCE have been deemed of sufficient importance by Dr. Rathery to form the subject of a thesis. According to this gentleman, these are numerous and various. He divides them into troubles of the nervous system, of the digestive tube, of the genito-urinary apparatus, of the functions of the skin, etc.

Under the first head are comprised disturbances of intelligence, motility, sensibility, and mixed troubles. Delirium in its various forms, vertigo, cephalalgia, are among those most frequently encountered under the first subdivision, while among troubles of motility paralysis is the most important. In addition, however, convulsions, trembling, and contractions are met with, and to these Dr. R. devotes a chapter containing much that is interesting and new.

Among troubles of the digestive apparatus which may retard convalescence, ravenous hunger, or, if this is satisfied, weight in the stomach, abdominal distention, and flatulence, may be mentioned. In addition, laborious digestion and diarrhœa are not uncommon.

The accidents which may attack the respiratory tract during convalescence are not numerous. Laryngeal necrosis is occasionally observed after typhoid fever.

As to accidents of the circulatory apparatus, these may be divided into central disorders, as palpitations, etc., and peripheral, the principal consequences of which are dropsy and gangrene of the extremities. If in addition to the above we mention troubles of the genito-urinary functions, albuminuria, and the like, and troubles of the skin, desquamation and certain erythematous and papular eruptions, we shall have pretty much covered the ground gone over by Dr. Rathery. The work terminates by some general considerations,

together with the various therapeutic indications, and has a certain value on account of the novel point of view, and also as drawing attention to a frequently neglected portion of the physician's duty,—the guidance of convalescence.—*Le Progrès Médical*, May 1.

A CASE OF HEMIPLEGIA FROM LIGHTNING-STROKE.—A signal-man on one of the German railways had occasion to wind a clock connected with the telegraph during a thunderstorm. At the moment when his *left* hand was on the key, a flash of lightning struck the wires, and from thence passed to the clock, the key, and the patient's hand and arm. He fell to the ground, senseless, but was awakened an hour or so later by the rain pouring upon his face, and managed to drag himself home. Examination showed abolition of motility in the upper and lower extremities on both sides, as well as decided diminution of sensibility. During the following days the patient suffered from severe pain in the head, sleeplessness, dizziness, and muscular tremor. At first there was retention of urine and fœces, the bladder having to be emptied by catheterization. These symptoms gradually disappeared, though the patient complained for some time of a feeling of pressure on the chest. Under the use of electricity the patient gradually recovered in a very considerable measure the use of his limbs. Dr. Eulenberg, who reports the case in the *Berliner Klin. Wochen.*, April 26, gives very full notes of the symptoms, and believes the lesion to have been a hemorrhage in the region of the corpus striatum. It was a curious circumstance (which Dr. E. discusses at length) that the lesion occurred on the opposite side of the brain to that which should theoretically have been affected.

ACNE OF THE PHARYNX, ETC.—M. Isambert, in a clinical lecture on disease of the larynx and pharynx published in *Le Progrès Médical*, May 15, speaks of acniform angina as follows: Three principal varieties have been described:

1. Simple acne, characterized by red prominences, which may suppurate or even ulcerate. The accompanying sensation is that of tickling, which provokes coughing and hawking. This form is coincident with facial acne.

2. Pustular acne is situated principally upon the tonsils. Two or three glands only are attacked at a time. It is, in fact, an inflammation of the cryptic glands of the tonsil, with hypersecretion of caseous matter, and, occasionally, encystment of cretaceous calculi.

3. The third form is acne indurata, due to hardening of the glandular exudation. The elimination of this secretory product is followed by ulcerations, which often unite and give the appearance of a honeycomb to the surface.

Although but few observations upon this form of acne have been made, yet it seems probable that this affection is not unusual, and is similar in all essential respects to the same disease as it appears on the external skin.

EPILEPSY—CURE FOLLOWING A WOUND.—Dr. R. Blache reports the following case (*La Tribune Méd.*, May 16).

A boy of eleven was attacked by epilepsy, the fits coming on at first twelve and then eight days apart. Bromide of potassium was prescribed, but was not followed by any amelioration of the symptoms.

One day, while cutting wood, the patient chopped off the extremity of the left middle finger, the incision passing through the middle of the nail. For two hours the unfortunate individual uttered cries of anguish, and was extremely excited. At the end of that time the wound was dressed; it healed kindly, and no return of the epileptic attacks occurred.

DIFFERENT EFFECTS OF PEPSIN.—Dr. Dettmar Finkler (*Archiv für Physiologie*) has made some digestive experiments to discover the explanation of the points of difference between the views of Ernst, Brücke, and George Meissner.

He found when coagulated albumen was allowed to dissolve at the proper temperature in the juice expressed from a pig's stomach, taken as fresh as possible, acidulated with hydrochloric acid, that no evidence of the existence of parapepton was obtained, on following the plan recommended by Meissner; although a satisfactory response followed the application of the test when the digestive fluid was made from commercial pepsin (*pepsinum activum*) instead of the recent juice. In this last solution the other reactions were obtained also, which Meissner thought were caused by the presence of metapepton, and a-, b-, and c-pepton. Increasing the quantity of the pepsin used did not diminish the amount of the precipitate on neutralization.

It may be proper to add that in the first solution, *before the albumen was completely dissolved*, a precipitate was obtained when a portion of the fluid was neutralized by caustic soda, but not after the albumen had disappeared and the solution became clear.

He therefore thinks that the physiological digestive process has been correctly recognized by Brücke.

W.

THE ANTISEPTIC TREATMENT OF MASTITIS BY LISTER'S METHOD.—E. Heyder (*Centralblatt für Med. Wissen.*, No. 19, 1875) describes the method usually employed in Bardeleben's clinic. When, in spite of ice-bladders and support, an abscess has developed in the mammæ, he washes the surface with a one-and-a-half per cent. solution of carbolic acid, and then under the carbolic spray he makes an extensive incision and opens a way out for the pus by the finger. Subsequently, counter-openings are made, and drainage-tubes placed in each opening. Compresses of lint and gauze are placed over the wounds, and the whole is kept in place by a gauze bandage. All dressings are soaked for three hours in a five per cent. carbolic acid solution, and then preserved in a one-and-a-half per cent. solution. After twelve hours the second dressing is applied over the other, consisting of several gauze compresses, the outer one covered with a piece of rubber cloth. The dressing is not again changed until the secretion soaks through. The author's preference for this method is based upon the fact that the fever quickly abates after the incision has been made, the secretion of pus can be restrained, and the cure is accomplished in from eleven to fifteen days. New abscesses seldom make their appearance. The author recommends the procedure for private practice, being quicker and more convenient than that ordinarily used.

X.

GLYCOGEN IN THE LIVER AFTER LIGATION OF THE DUCTUS CHOLEDOCHUS.—V. Wittich (*Centralblatt für Med. Wissen.*, No. 19, 1875) has ligated the bile-ducts in pigeons and rabbits, and, collecting the excretions, has examined them as well as the livers of the animals by a process of which the outlines are given in his communication. Comparison of the results with those obtained by examination of healthy livers shows a marked diminution in the glycogen after ligation of the bile-ducts. Wittich suggests that this may be explained by supposing either that the glycogen in the liver is more rapidly converted into sugar and carried into the circulation in presence of the retained bile, or that the liver, interrupted in its secretion, produces no more glycogen than that which is present at the time. The latter view would more easily explain Wickham Legge's experiments, though these contradict Wittich's observation of spontaneously appearing melituria, as well as the

observations of other authors in regard to the appearance of sugar in the urine after any irritation of the liver.

X.

THYMOL—A NEW ANTISEPTIC.—Dr. L. Lewin sends a communication to the *Centralblatt für Med. Wissen.*, No. 21, 1875, on the subject of thymol, a benzole occurring in white, aromatic crystals, soluble in hot water in the proportion of 1 to 1000, and having in solution a neutral reaction.

A comparison instituted between thymol and salicylic and carbolic acids, as to their relative effect in retarding fermentation, resulted in placing the former at the head of the list, it showing twice as great anti-fermentative effect as carbolic acid, and four times as great as salicylic. Similar results were shown in mixing the thymol solution with putrid matters, this substance showing marked antiseptic properties.

Although thymol itself is expensive, yet it acts in so dilute a solution as to render it in fact cheaper than either carbolic or salicylic acid.

Dr. Lewin promises further particulars in regard to the new disinfectant, with which he is experimenting extensively.

X.

XERODERMA (SCLERODERMA? Tr.).—The following case is reported in the *Allg. Wien. Med. Zeit.*, 1874, 35, by Dr. I. Glax.

The patient, a female, 26 years of age, had had, even in childhood, an inelastic skin. After an attack of articular rheumatism, occurring in her twenty-second year, she experienced a difficulty in moving the extremities, the skin became cool, and the face stiff. The skin appeared in some places thin and parchment-like, and somewhat pigmented. The integument of the extremities was stiff and like marble. The fingers remained immovable in a semi-flexed position. Nothing else abnormal was observed. Dr. Glax hoped by inhalations of amylic alcohol and administration of whisky to bring about enlargement of the minute arteries, and, as a result, greater succulency of the tissues with secretion of sweat. While, however, the symptoms of xeroderma were disappearing under this treatment, the patient went from under observation, and the result remained, unfortunately, unknown.—*Centralblatt*, No. 19, 1875.

X.

GLYCERIN IN THE TREATMENT OF DIABETES.—M. Garnier has addressed a note to the Académie des Sciences on the employment of glycerin in the treatment of glycosuria. M. Schutzen, of Dorpat, has shown by his researches that glycerin either alone or associated with tartaric acid, and taken in the dose of half an ounce to an ounce and a half in the course of twenty-four hours, constitutes a valuable adjuvant to the régime especially adapted to glycosuria. M. G. has himself made use of purified glycerin, and has made it more palatable by mixing it with a certain amount of alcohol and of aromatic substances (mint, anise, bitter orange). The employment of glycerin has aided him greatly as well as other patients.—*Bull. Gen. de Thérap.*, No. 10, 1875.

TREATMENT OF CAVERNOUS ANGIOMA WITH GALVANO-CAUSTIC PUNCTURES (E. Tüngel: *Centralblatt für Chirurgie*, No. 22, 1875).—The method of treatment here described is one of which Thiersch availed himself in a case of extensive cavernous angioma. A metallic plate in which there are numerous perforations, through which a straight metallic instrument suitable for the formation of fistulæ can be passed, is pressed upon the tumor. The advantages claimed for the procedure are that if the clamp is allowed to remain upon the tumor for half an hour after the operation, there is no hemorrhage, the reaction is but slight, and the time requisite for healing short.

W. A.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

WOMEN IN MEDICINE.

A CHRONICLER of the passing events of the day cannot fail to note the continued growth of the "woman movement" in medicine. Abroad, Mrs. Garrett Anderson appears to be received freely in the best medical circles of London; at home, we have the president of our State association congratulating the society on the establishment of our Woman's Medical College; in New York a woman presides, or has presided, over the county medical society; and in Boston the Medical Journal lavishes praise on Miss Susan Dimock, who was lost in the *Schiller*. As we said some time since, the day for discussion is over; and, although the brain of the average woman does weigh less than that of the average man, and although some may believe the profession is being deteriorated, going to ruin, or what not, yet it is becoming more and more apparent that, like the negro at the South, woman in medicine is a fact which it is wiser to adapt ourselves to than to knock out our brains against.

There is one position of usefulness which all of us are probably willing medical women may fill,—i.e., physicians to the zenanas of India. A number of women, all of them more or less thoroughly educated in medicine, some of them thoroughly cultivated and refined, have already been sent to that country from the United States. Penetrating into families where it would be impossible for a man to enter, carrying healing in one hand and the Bible in the other, they have already done great

good, and are becoming a most efficient power in overthrowing the abominable customs of heathendom.

The whole policy of the India government towards missions has, of late years, been reversed: formerly it was even actively hostile, now it is actively friendly,—a change probably due to the recognition of the fact that India can only become English by first becoming Christian. Probably from seeing the good which is being accomplished by the female medical missionaries, the India government has decided to encourage the medical education of women, and has opened the Madras Medical College to them. Indeed, while the unfortunate wearer of pantaloons has to pay heavily for the privileges of the lecture-room, the whole course is given gratuitously to any capable wearer of petticoats. The course of study is three years; with the exceptions of obstetrics and surgery and one or two lectures in anatomy and physiology, the female students are required to attend with the male.

SCHOOLS FOR MIDWIVES.

THERE lies on the table before us the circular of the "St. Louis School of Midwives." This institution, which claims to be, and we presume is, the only one of the character in this country, has been in existence in one form or another since 1854, and has not, therefore, found many imitators. Possibly as "Mrs. Carpentier's School of Midwives" its character was such as to make it love darkness better than light. Of this, however, we have no knowledge. With Dr. George J. Engelmann as its director, the institution certainly challenges thoughtful attention. Either such schools ought or ought not to exist. If they are baneful, it ought to be known; if they are useful, St. Louis ought not to hold the monopoly. The object of present writing is not to praise or to criticise, but if possible to call out discussions from those better informed upon such subjects. At first view, it seems to us that such "schools" are injurious, and will become the mothers of the worst form of quackery; but we may be mistaken. To make the matter clearer, we append the following extract from the circular itself:

"The wives of laborers and mechanics, when about to become mothers, are wont to trust their lives in the hands of midwives, the English-speaking of whom are mostly wholly uneducated and totally incapable women; and now, as the population of our city is rapidly increasing, the proper instruction of such midwives becomes a most important matter.

"There is great need of educated English-speaking

midwives, not only in this city, but throughout the entire country, and it is the object of the St. Louis School of Midwives to educate capable and conscientious women to supply this demand, to give to the women of the working classes better help in their hour of trial.

"We shall award our diploma only to such as are qualified and fit to discharge their important duties. We shall graduate midwives who are competent to conduct natural labor cases and will not go beyond this; who are able to detect any deviation from the ordinary course of labor, any threatening danger, at an early period, in order that medical assistance may be called in time. We shall not graduate female physicians or women who will in any way dabble in medicine."

All this may appear very reasonable; but is it not rather absurd to suppose that the school can control its graduates so that they shall not dabble in medicine? So far as concerns this part of the country, the wives of laborers and mechanics, at least of the English-speaking races, are not wont to trust their lives to midwives; but it is barely possible the introduction of such ministers of good might be a good—or might be an evil. Which would it be?

LEADING ARTICLE.

THE DISCUSSION ON PUERPERAL FEVER IN THE LONDON OBSTETRICAL SOCIETY.

THE proceedings of the great London medical societies have been enlivened of late by discussions on general medical subjects. It was complained some time ago that "the continual passing around of livers on soup-plates" at the Pathological was becoming monotonous, and the suggestion was made that this time-honored procedure should occasionally be varied by discussions on questions connected with general pathology. The idea found favor, and one of its first fruits was the well-remembered debate on the relation of tubercle to phthisis, which was carried on by distinguished members of the Society, and attracted general attention. It was followed by discussions upon cancer, and recently upon the germ-theory of disease. The Clinical Society also adopted the idea, and the debate upon pyæmia which resulted attracted no less attention than did those of the Pathological. Now we have the Obstetrical Society following the fashion in a discussion upon puerperal fever, a discussion claiming attention not less from the character of the participants than from its intrinsic interest. On the first evening upon which the subject came up for discussion, Mr. Spencer Wells opened the debate with a series of propositions or questions essentially as follows: Is there such an entity as puerperal fever? or may all the forms of fever known under this name be referred to the attacks of some well-known continued fever, as scarlet fever on

the one hand, or on the other to some surgical fever, as erysipelas, pyæmia, or septicæmia? Assuming such a disease, how can its spread in private and hospital practice be most certainly prevented or checked? In conclusion, what relation have bacteria and allied forms to the pyæmic process in the puerperal state, and what is the value of antiseptics in the prevention and treatment of puerperal fever?

In the very interesting address with which he introduced these propositions, Mr. Wells showed himself emphatically opposed to the idea of the existence of such a disease as puerperal fever, the process usually known by that title being only a modified form of one of the affections above mentioned. As regards the nature of the contagion, he expressed himself in favor of the germ-theory, and advocated the use of antiseptics. Finally, he urged that if pyæmia and traumatic fever can be kept out of a surgical hospital, there is no reason why puerperal fever should not be kept out of a lying-in hospital.

Drs. Leishman and Braxton Hicks continued the discussion. The former contented himself with the consideration of the identity of puerperal fever with the various other affections alluded to. He agreed in the main with Mr. Wells, but believed in some special condition in the puerperal state which favors the occurrence and intensifies the malignancy of intercurrent affections.

Dr. Hicks expressed views similar to those of Messrs. Wells and Leishman, but gave a very doubtful assent to the bacteria-theory.

Mr. Jonathan Hutchinson, regarding the subject from a surgical point of view, expressed himself opposed to the idea of a specific poison which can produce any fever which should be known as puerperal fever.

Dr. Richardson, who closed the discussion, maintained that a woman after delivery was just in the condition to be the subject of a series of changes which must be febrile in character. He agreed with the previous speakers in rejecting the notion of a special poison belonging to the puerperal state, as well as that of the existence of such a disease as puerperal fever. As regards the germ-theory, he was opposed to this and in favor of the purely physical theory of contagion. Antiseptics he thought useful, not because they destroy the germs, but because they interfere with the poisonous action of the septicæmous material which produces the fatal disease. Finally, Dr. Richardson made the cheerful prediction that within ten years some method of preventing these diseases would be discovered, which should be as certain as vaccination against smallpox.

It will be seen that thus far but little has been gained by the debate. The gentlemen who took part in it seem generally agreed as to the non-existence of the disease under discussion; some have also expressed their adherence to the germ-theory of disease, others have opposed it. This seems to be the essence of what has been gained. The whole debate would appear from the report to have been rather of an impromptu and extempore character, scarcely worthy of the subject and the Society. We must except from this Mr. Wells's

address and formulated propositions, which, if followed strictly, would perhaps have resulted in more light being thrown on the subject than has been the case.

As the discussion has not yet been closed, but only adjourned, we may hope to have more facts and figures and fewer anecdotes from future speakers.

CORRESPONDENCE.

BOSTON, June 10, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—A year ago it was my privilege to send you an account of the Annual Meeting of the Massachusetts Medical Society. During the past two days the yearly reunion has recurred. It seems to be the general opinion of its members that the Society was never in a more flourishing condition than at present,—a prosperity due in no small degree, as I learned from gentlemen from various parts of the State, to the efficient administration of affairs during the past year by the President, Dr. B. E. Cotting.

On Tuesday, at 10 o'clock A.M., there were operations and surgical visits at the Massachusetts General, the City, and the Carney Hospitals.

Last year I reported concerning the two new wards that had been erected at the first-mentioned hospital. So much satisfaction was given by them that since that time the trustees have erected a third new building, the Bigelow Ward, which is thought to present some improvements upon those erected two years ago.

The grounds about the City Hospital are in a state of considerable confusion, in consequence of the laying of foundations for new structures. The city government has appropriated \$190,000 for the purpose of furnishing increased accommodations and facilities for the institution. There are to be four new pavilions,—two for surgical and two for medical cases,—a new amphitheatre, accident-room, etc., on the first floor, and various other additions, which it is hoped will be in working order by the time of the next annual meeting, and which will nearly double the capacity of the institution, so that it will furnish four hundred beds to patients.

At 12 o'clock M. the Society met in the Hall of the Lowell Institute, to listen to the reading of papers. The first paper was by Dr. R. T. Edes, of Roxbury, "On the Treatment of Typhoid Fever by Cold Water." The writer stated that the use of cold water in the disease under discussion was not a new remedy; that its success must not be judged of *a priori*, but by experiment. Sponging and packing are not so useful as the bath. A full bath, at the temperature of the body at first, and gradually cooled, is to be taken. Meanwhile, the patient's extremities are to be rubbed, and wine is to be administered. The employment of stimulants is of importance in almost every case. The bath is to be repeated as often as the patient's temperature becomes excessive,—often five or six being given in twenty-four hours. Dr. Edes thinks that statistics show a fall-

ing off in the mortality of typhoid fever from the use of baths. His own experience extended to sixty-six cases, of which eleven proved fatal.

The paper was temperate in its character, and moderate in its advocacy of the treatment proposed. In view of the acknowledged difficulty of properly carrying out the method, it would seem hardly probable that, except in hospitals, the treatment of typhoid fever by cold baths will ever be much practised unless results much superior to those of other methods can be shown for it.

Dr. G. E. Francis, of Worcester, next read a paper on "The Obstetric Forceps as a Time-saver." He laid it down as an axiom that mortality in labor increases in proportion to the length of the labor,—this of the second stage. Accordingly, we ought to shorten the latter as much as possible. The forceps are the means of attaining this end, and we should use them before the patient's strength is exhausted. In the last three hundred cases which had occurred in the reader's practice, he had used the forceps fifty-one times. He had followed the rule of not waiting longer than two hours after dilatation of the *os uteri* before applying them.

A paper on "The Microscopy of the Urine" was presented by Dr. G. H. Pillsbury, of Lowell. Its object was to urge the use of the microscope, whose revelations are much more satisfactory than those of chemistry, for the discovery of abnormal matters present in the urine, and to dissuade the minds of his hearers from the idea that the employment of the instrument requires a skill attainable by but few, or that an expensive instrument, and one of very high power, must be employed in an examination sufficiently accurate for practical purposes.

Dr. Leonard Wheeler, of Worcester, followed with an essay on "The Inner Surface of the Uterus after Parturition." He stated that during pregnancy the connective tissue of the uterus enormously increases, and the epithelial covering mostly disappears. After parturition there is a wounded surface composed of connective tissue well fitted, apparently, for resorption of different substances into the blood or lymph system. The method of the process of renewal of the epithelial lining is difficult to determine. The process seems to be one of fatty degeneration of the lining tissues of the uterus, and the products of this degeneration form a part of the lochia. An epithelial layer gradually forms, most slowly over the placental site.

Dr. F. W. Russell, of Winchendon, followed with a long paper on "Alcohol in some of its Pathological and Social Relations." A minute description was given of the effect of alcohol on the different tissues. The various forms of aberration of the intellect due to the abuse of alcohol were considered. The reader criticised the idea of trying to reform drunkards after diseased action is set up.

In the evening the annual meeting of councillors was held, at which the following were chosen officers of the Society for the ensuing year:

President, Dr. B. E. Cotting, of Roxbury.

Vice-President, Dr. Joseph Sargent, of Worcester.

Treasurer, Dr. F. W. Draper, of Boston.

Corresponding Secretary, Dr. C. W. Swan, of Boston.

Recording Secretary, Dr. F. W. Goss, of Roxbury.

Librarian, Dr. D. H. Hayden, of Boston.

Dr. P. Le B. Stickney, of Springfield, was appointed Orator, and Dr. J. H. Mackie, of New Bedford, Anniversary Chairman for the next annual meeting.

At 10 o'clock P.M. the Society re-assembled in the Lowell Institute to listen to a paper by Dr. C. J. Blake, of Boston, on "A New Use of the Membrana Tympani." The paper was illustrated with illuminated photographs by means of Black's stereopticon. A preparation of the ear was shown, in which the membrana tympani had been exposed, and styles attached to the handle of the malleus and the point of the incus. When the membrana tympani was set in vibration by a sound, the style traced a waved line on a bit of smoked glass. The curves formed by different vowel-sounds and by different musical notes were perfectly distinct from each other in character, and each sound had its own particular curve.

Dr. A. Graham Bell, who was present, stated that he hoped this process of phonautography might be of use in the teaching of deaf-mutes. The paper of Dr. Blake was highly interesting.

At 9 o'clock A.M. of Wednesday the Society re-assembled, and, after the reading of records, introduction of delegates, etc., a paper was read by Dr. Ira Russell, of Winchendon, on "State Inebriate Asylums—the Expediency of their Establishment." The writer advocated the affirmative of the question, and ended with the introduction of a resolution that the Society call upon the State to establish inebriate asylums. A lively discussion followed the reading of the paper. Dr. Earle, of Northampton, stated that the law did not permit, nor was it desirable, that inebriates and the insane should be treated in the same institution, and he favored the establishment of inebriate asylums with only such classification of patients as the degree and kind of inebriety under which the patient labored allowed of.

Dr. Tylor, of Boston, said there were recoveries enough from inebriety to call for a rational treatment of this class of patients. He agreed with the previous speaker, that inebriates and the insane should be treated in different institutions.

Dr. Millet, of Bridgewater, differed entirely from the views of the previous speakers. He believed inebriety a crime and not a disease, and he would have cure of the evil attempted by moral influences and legal punishments.

Dr. Godding, of Taunton, in a letter upon the subject under debate, while advocating the treatment of inebriates in separate asylums, strongly urged the necessity of compulsory labor as an essential part of the successful treatment of drunkards in such institutions. The sentences to the asylums must be long if permanent good was to result.

Dr. Woodward, of Worcester, had not much faith in the permanent cure of drunkards. In his opinion, drunkenness was a vice, and not a disease, and the in-

stitutions for its treatment should be penal. As such, they would have little advantage over the existing work-houses and houses of correction. After further discussion by several Fellows, the motion of Dr. Russell was laid on the table.

At 12 o'clock M. the annual discourse was delivered by Dr. George H. Lyman, of Boston, on "The Interests of the Public and the Medical Profession." After having defended the Society against the charge of exclusiveness and intolerance which has so often been made of late, particularly on account of the expulsion of several irregular practitioners from its ranks, he stated that the record of the Society shows that from its origin continuous efforts have been made to raise the standard of preliminary education. A large part of the address was devoted to the consideration of the question as to whether our medical schools and hospitals should be opened to women; if so, whether by the method of separate or mixed instruction; and, finally, whether those able to pass satisfactory examinations shall be admitted to the Society. The orator's opinion was that if women are to be educated as doctors with any prospect of success, it must be effected through the instrumentalities already in operation for the instruction of male students. While not advocating their admission into our medical societies, he admitted a conviction that women should have the higher education they are seeking for, but should find for its development other and more appropriate spheres, which are as yet far from being exhausted.

At 1 o'clock P.M. the Society adjourned to the Music Hall, where between six and seven hundred members enjoyed the festivities of the Anniversary Dinner.

PENN.

BALTIMORE, June 16, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

I WONDER if your readers are aware that Baltimore is indeed a queen among cities, in that she alone of all has a surface-drainage and little or no sewerage. The goddess she worships is Cloacina, and, as is proven by our health officer of the State, E. Lloyd Howard, her very springs are loaded with her offerings of organic matter, obtained from a soil saturated with human excrement from privy-vaults and cul-de-sacs. She is ripe, and her time seems almost full. Some coming epidemic of cholera, yellow fever, or other curse of God will certainly sweep through this great city of 350,000 inhabitants and reap the rich harvest prepared by physical sins. However, a remedy has been proposed in salicylic acid. This disinfectant should be in daily use in our water-tanks, cooking-utensils, privy-vaults, cesspools, garbage-boxes, and in fact in every place where fermentation and putrefaction may exert a baneful influence upon this unsewered and *malo-basinic* city. Oh! that horrid, stinking, dirty, nasty basin; that turbid Jones's Falls; that fruitful source of disease and political pap; that sad ravager of the poor little ones who dwell in the lower strata of this evil purlieu!

"Oh, it is pitiful!
In a whole city full,
Friends they have none."

As a disinfectant, salicylic acid is better than any yet offered, because of its tasteless and odorless properties, its great potency in maintaining liquids in their purity, and its power of arresting decomposition and destroying germ-cells in animal and vegetable life.

Our plan once adopted, Baltimore invalids may again resort to their sulpho-iron springs as has been their wont in days gone by, with their old promise and assurance of health and vigor. It would have interested you, Mr. Editor, to see the many sad long faces next morning at the locked pumps and closed springs here in Baltimore after our learned health officer's discovery, duly noticed by the public prints, that these favorite haunts were saturated with occasional animal débris.

Yours,

OCCASIONAL.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

WEDNESDAY, APRIL 7, 1875.

DIABETES INSIPIDUS, AND ITS TREATMENT BY ERGOT.

DR. DA COSTA related the following case: Stephen S., native of Bavaria, a tailor, was admitted into the men's medical ward of the Pennsylvania Hospital on the 19th of October, 1874. A small, thin man, about 43 years of age, hollow-eyed, with prominent cheek-bones, his complaint of weakness and prostration agreed perfectly with his emaciated appearance. Suffering continually from shortness of breath, from indigestion, with acid eructations, a burning sensation in the epigastrium, complete anorexia, and from immoderate thirst; having his rest at night broken by the frequent necessity for micturition,—he considered but too correctly that his health was lost, and that he was rapidly failing.

No family history could be obtained, and he positively denied any venereal taint. He had always regarded himself as a healthy man until two years ago, when he met with a serious accident. By a fall from the roof of a house he was badly contused, besides sustaining a fracture of his clavicle and some of his ribs, and hurting the back of his head; for nearly a year after this fall he suffered from headache and vertigo.

During the summer of 1874 he had been treated for rheumatism, and was discharged, cured. At this time he was troubled with frequent urinations, and was obliged to rise during the night two or three times. This gradually increased until the date of his re-admission, the day after which (October 20) the urinary examination gave the following result: The urine in color was very light, almost limpid, slightly acid in reaction, the specific gravity only 1001; it contained neither albumen nor sugar; the quantity in twenty-four hours was 224 fluidounces, corresponding exactly with the amount of water he had drunk.

Conjointly with the troublesome and exhausting flow, the torturing thirst, progressive impairment of hearing, *muscæ volitantes* principally in the left eye, and shortness of breath, increasing gradually from very slight disturbance to positive dyspnoea, were making his existence a very miserable one.

He was ordered two drachms of infusion of digitalis

and half an ounce of a compound gentian mixture thrice daily, and for the first week improved greatly, the daily amount of urine passed diminishing to 108 ounces. A week later, however, he was passing 252 ounces, and was obliged to retire to his bed, which he had left. The previous prescription was now discontinued, and nitro-muriatic acid, three drops in a drachm of compound tincture of gentian, given him every four hours; he also took ten drops of deodorized tincture of opium four times daily.

He then steadily grew worse, until his condition appeared hopeless. Quinine, stimulants, and animal broths were administered, and the opium and acid mixture were discontinued. He slowly rallied, and was placed on one drachm of the fluid extract of valerian four times daily. The general condition again improved, and on November 17 he passed 195 ounces of urine of the specific gravity of 1006.

A searching examination was then made of the viscera and nervous system, but the seat of the lesion could not be discovered. The pulse was 84; the respiration varied between 18 and 24. The temperature of the body was 97.5°. It had at no time been higher than 99°, and had repeatedly fallen to 97°, with an evening exacerbation of half a degree, or very occasionally of one degree. A half-ounce of cod-liver oil thrice daily was added to the treatment.

On the 25th he was passing 260 ounces of urine. The valerian was now stopped, as it had so evidently wholly failed, and ten grains of hydrate of chloral were given four times a day; but, as the dyspnoea seemed to increase, this in turn was abandoned in favor of bromide of potassium, twenty grains thrice daily.

During the first days of December the face and ankles became œdematous, the subcutaneous veins of the legs were enlarged, and dark-red lines were visible on the lower extremities, which also pitted readily on pressure. He complained still of a great deal of headache, and of a feeling of tenseness of the skin on the forehead, and furuncles became manifest on the face. His condition was thus little, if at all, changed for the better.

It was then determined to give him ergot, which was at first resorted to hypodermically; but this caused so much local disturbance that the remedy had to be administered by the mouth.

The internal use was begun on the 7th of December, one drachm of the fluid extract being given three times daily; this was increased on the 18th of December to two drachms thrice daily. The diet was the same as before; the cod-liver oil was continued for a time, but not with great regularity, and it was presently wholly stopped.

From the time that the treatment by ergot was instituted, there was steady diminution in the daily amount of the urine, and rapid improvement in the patient's health; indeed, this was without a drawback, with the exception of a slight attack of pleurisy followed by some congestion at the base of the lung, and lasting only a few days. The patient was practically well on the 25th of January, 1875, when the ergot was discontinued; but he was retained under observation until March 10, in order to decide whether the improvement was a permanent one.

When discharged, he was well and strong, and he had never been in better health. During his stay with us he gained in weight forty pounds; and it was difficult to recognize, in the fat, bright-eyed, jovial man who left the hospital, the lean, languid-looking, dejected patient who had come to it but a few months before apparently to die.

From the first of the year to the date of discharge, the maximum amount of urine passed was seventy-four ounces, and it had been several times as low as forty ounces per day.

The history of this case, as of many others, shows the source of the disease to be the same indubitable nervous disorder. But whether it be, as seems most probable, in the sympathetic nervous system, or the derangement leading to loss of control be simply reflected to this from the cerebro-spinal, is a matter, with our present knowledge, of the merest conjecture. In a number of the autopsies made—they are not, it must be stated, very numerous—the lesion has been located at the base of the brain, or in the cerebellum or the medulla; but there are records of the disease in which injury of the abdominal ganglia by a tumor gave rise to the distressing malady.

Diabetes insipidus is, when well marked, for the most part a fatal disorder, though the patient may be kept in fair health for years.

This case is the first one which Dr. Da Costa has seen recover in which there were such grave symptoms besides the excessive flow of urine. That the recovery was due to the ergot there can be no doubt, and its effect on the capillaries, both of the nervous centres and the glandular organs, suggests its mode of action.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

MAY 3, 1875.

IN the absence of the Director and Vice-Director, Dr. J. H. McQUILLEN was called to the chair.

The Report of the Committee on Dr. Seiler's paper upon the "Photographic Enlargement of Microscopic Objects," recommending it for publication in the *Philadelphia Medical Times*, was read, accepted, and the committee discharged.

A paper on the "Physiological Action of Hemlock and its Alkaloids," presented by Prof. H. C. Wood, Jr., for B. F. Lautenbach, M.D., was read by title, and referred to a committee composed of Drs. Schaeffer, Richardson, and Reed.

Verbal communications being next in order, Dr. J. GIBBONS HUNT made the following remarks:

"Mr. Director,—Anticipating more than the usual amount of intellectual and microscopical dry weather at the Section this evening, I have brought with me a few slides for the inspection of members, believing they show some interesting points of histological detail with considerable distinctness.

"I am unfortunate in having no very distinguished microscopical friend residing at a distance to kindly send me preparations for exhibition, but am compelled to rely upon domestic manufacture, which, of course, cannot claim to rank with those of foreign make.

"Still, when properly illuminated, as these now are, the members may see the intestinal villi of the rabbit perfectly injected, and mounted in natural position, so that the mucous surface appears with the entire columnar epithelium attached, each cell distinct. Most of the villi show the muscles of Brücke clearly. In the muscular coat of the same intestine the lymphatic vessels appear without injection.

"A slide containing a piece of mesentery of juvenile cat shows one dozen Pacinian bodies, which must be seen under the binocular to be properly appreciated. These supposed nerve-terminations in dead cats vary greatly in size and apparent complexity of structure, being from the $\frac{1}{200}$ th of an inch up to a magnitude which unaided vision can detect. The fat-tissue is well injected, and the crystallized fat appears *in situ*, not having been dissolved out as is usually the case. The nerves are preserved with less structural change than I have seen elsewhere. Their nucleated filaments appear

winding around the vessels and distributed to their coats with great distinctness. The elastic connective-tissue fibres are all apparent, and their mode of inosculation may be studied.

"An injected solitary gland of the large intestine of the rabbit shows it to be structurally like the individual gland in Peyer's patches. In the same specimen we can look right down into the open orifices of innumerable follicles of Lieberkuhn, which display all the epithelium *in situ*.

"A slide of the cæcum of the rabbit shows that organ to be simply an aggregation of glands resembling those in Peyer's patches, having, of course, between them villous prolongations unlike mucous surfaces elsewhere.

"I am conscious that such plain and easily demonstrated histological details are neither rare nor difficult; but, knowing they would be new, and possibly interesting to the members, I venture to offer them for examination."

After a recess of ten minutes, allowed for the examination of these interesting specimens, the chairman inquired of Dr. Hunt what menstruum he had found most useful for the preservation of nerve-tissue.

Dr. HUNT replied that, since we have never seen a fresh and living nerve-cell or fibre, we possess really no standard for judging of the success of any method of preparation; but that in his experience nerve-structures underwent the least possible change if immersed in a weak solution of glycerin in camphor-water, whose strength was gradually increased by the addition of more glycerin until a suitable preservative fluid was obtained.

Dr. J. G. RICHARDSON inquired of Dr. Hunt whether he had not distinctly seen in the tails of living salamanders living nerve-fibres which would serve as standards of comparison.

Dr. HUNT replied that such nerve-fibres could be seen as distinctly as the layers of connective tissue and epithelial cells would permit.

Dr. RICHARDSON added that since red blood-corpuscles circulating in vessels at the same depth, and hence observed through the same intervening layers of connective tissue and epithelium, exhibited appearances identical with those of other red corpuscles from the individual salamander immediately after their exit through a wound of the integument, he believed he might fairly conclude that the nerve-filaments thus seen were *distinctly visible*, and that therefore the somewhat irregularly swollen and knotted outline they presented was a normal character of healthy living nerve-fibres, and not a pathological or post-mortem change.

Dr. CARL SEILER announced for the benefit of members that there was now in operation at the University of Pennsylvania in West Philadelphia, under the care of himself and other gentlemen, a physiological laboratory, affording room, apparatus, and, to a certain extent, material, for original investigations, which any physician might carry on at a small expense. The laboratory (which was connected with a microscopical department) was open from 10 A.M. to 5 P.M., and was, he believed, the first of its kind in this city, or perhaps in this country; although similar institutions had long been established in Heidelberg, Vienna, and other Continental seats of medical science.

THE MONASTERY OF ALTENBERG have advertised for a resident physician, who is to receive, besides his board and lodging, a salary of about \$100 per annum. For this munificent salary he is not only to give his professional services to the sick in the monastery, but will be expected to take charge of the hair and beards of the holy brethren.—*N. Y. Medical Record*.

REVIEWS AND BOOK NOTICES.

PNEUMOTHORAX. By AUSTIN FLINT, SEN., M.D., Professor of the Principles and Practice of Medicine in Bellevue Hospital Medical College; being No. III. of Vol. I. of a series of American Clinical Lectures. Edited by E. SEGUIN, M.D. New York, G. P. Putnam's Sons, 1875.

In this brochure from the pen of one of our foremost clinical teachers we find of course an excellent exposition of our present knowledge of pneumothorax in its medical aspects, illustrated by several typical cases of the disease. The author considers the accident of air entering the pleura as dependent upon the following four conditions, viz., "First, empyema; second, interstitial emphysema; third, circumscribed gangrene of the lung; and, fourth, phthisis." In the latter connection he inculcates the wise caution (so timely in these days of almost universal aspiration for fame) against wounding the pleura with Dieulafoy's needle. Prof. Flint also proposes to cure some rarely favorable cases of pneumothorax complicating consumption, "when the amount of phthisis is small, the disease non-progressive, and all the circumstances favorable for arrest and recovery, aside from the perforation of the lung," by free incision in the chest-wall; an original suggestion which seems worthy of more extended trial, in spite of the failure in two instances which its author so honestly records.

J. G. R.

GLEANINGS FROM OUR EXCHANGES.

CEREBRAL RHEUMATISM.—Among the complications which threaten rheumatism, none are more formidable than those which attack the brain, and which for want of a better name are designated cerebral rheumatism. They are not always of the same form or gravity, and their cure sometimes supervenes without any active treatment. Sometimes chronic delirium results, and forms the beginning of a variety of mental alienation now well known. The favorable cases are not the most frequent. Among the phenomena observable in cases which terminate fatally, there are two which are of great value in prognosis, viz., extreme elevation of temperature, and sudden and complete disappearance of pain. When delirium occurs in such circumstances, death is not far off. Coma succeeds the delirium, and death follows in a few hours. Dr. Blachez reports at much length a case in which, following the example of his colleague, Dr. Raynaud, he had the patient placed in a cold bath at a temperature of 73°·4 Fahr. (23° C.), which was gradually lowered, by addition of ice, to 68°, and kept therein an hour and a half. The result not having been discouraging, the bath was repeated ten times at temperatures varying from 61° F. to 77° F. (16° to 25° C.) within four days, after which the patient regained consciousness, and subsequently recovered health. The lower temperature had to be abandoned, as its immediate effects were alarming.—*Gazette Hebdomadaire**; *Irish Hospital Gazette*.

HATHORN SPRING WATER.—The *Boston Medical and Surgical Journal*, June 10, contains a communication by Dr. S. A. Fisk, of Northampton, on the waters of the recently discovered but famous Hathorn Spring of Saratoga.

These waters belong to the class known as alkaline-saline; the large amount of carbonic acid gas contained not only increases the solvent powers of that menstruum, enabling it to take up and hold in solution

a favorable combination of ingredients, but renders them very easy of digestion, and to most persons very agreeable to the taste. In taste and general character the Hathorn resembles the celebrated Congress Spring water; it is stronger, however, in some of its constituents, more prompt and certain in its action, and contains also a bicarbonate of lithia, which renders its diuretic properties of great value.

From personal experience Dr. Fisk speaks very favorably of Hathorn water. Its therapeutic action is very prompt. When taken in the morning it is agreeable to the taste, grateful to the stomach, and acts efficiently as an evacuant; and while it may, and in many cases does, induce full and copious dejections, they are not attended with pain; neither is languor or debility experienced by the patient; but, on the contrary, a feeling of refreshment and invigoration. The powers of assimilation and nutrition are increased, the appetite being favorably affected at once. That sense of fullness formerly termed "abdominal plethora," where the liver, spleen, and mesentery are more or less engorged with blood, and where hemorrhoids are present, is diminished, with a gratifying sense of relief.

When taken more frequently and in smaller quantities than the cathartic dose, its effect upon the kidneys is no less happy. Its action is prompt, uniform, and quite certain. A turbid, irritating urine is quickly cleared up by it; the ureters and bladder are soothed, and many cases of vesical catarrh are quite relieved by it. In some of the cutaneous diseases, those more especially dependent upon an acid state of the secretions, these mineral waters are beneficial both from their alkaline properties and from their depurative effects.

The following is the analysis of the Hathorn Spring:

Chloride of sodium	509.968 grains.
Chloride of potassium	9.597 "
Bromide of sodium	1.534 "
Iodide of sodium198 "
Fluoride of calcium	a trace.
Bicarbonate of lithia	11.447 "
Bicarbonate of soda	4.288 "
Bicarbonate of magnesia	176.463 "
Bicarbonate of lime	170.646 "
Bicarbonate of strontia	a trace.
Bicarbonate of baryta	1.737 "
Bicarbonate of iron	1.128 "
Phosphate of soda006 "
Biborate of soda	a trace.
Alumina131 "
Silica	1.260 "
Organic matter	a trace.

Total solid contents 888.403 "

Carbonic acid gas in 1 gallon, 375.747 inches. Density, 1.009.

HEMIPLEGIA WITH CLOT UPON THE SAME SIDE OF THE BRAIN.—At the recent meeting of the American Neurological Association, Dr. Hay, of Chicago, presented an interesting specimen of this kind, removed from a female patient æt. 55 years, in whom there was hemiplegia of the left side, face not involved, and the tongue could be protruded without deflection. The patient jumped from a railroad-train which was moving at a rapid rate, and was picked up insensible, in which condition she remained for about three weeks. She suffered from incontinence of urine and fæces. At post-mortem a meningeal clot was found over the frontal convolution, upon the left side of the brain, about a line in thickness, three-fourths of an inch in length, and about the same in width. No morbid conditions were found in any other part of the brain, and the clot was limited to this region.

* Cf. an admirable article on this subject by Dr. Da Costa, in the *American Journal of the Medical Sciences*, January, 1875.—Ed. I. H. G.

GASTROTOMY (*The Lancet*, May 15, 1875).—Mr. Sydney Jones reports the following case. A man, æt. 67, had had difficulty of swallowing for ten months, and for seven months had been unable to swallow solids. He had lost his voice for four months, although there was no difficulty of breathing. A bougie did not pass beyond the commencement of the œsophagus; and on bending the head forward, so as to relax the front cervical muscles, a hard tumor could be felt on the left of the trachea, behind the sternal end of the clavicle, too low down to promise anything from attempt at œsophagotomy. He had lost very much flesh. Previously stout, his abdomen was now fallen away, the ensiform cartilage projecting as a hook-like process. He complained much of hunger, and of persistent sinking pain at the pit of the stomach. His difficulty of swallowing liquids was increasing; and a constant discharge of mucus from his pharynx caused him much trouble. He did not complain of pain in the neck-tumor, which was discovered only after exploration for the cause of the stricture. It was impossible to do œsophagotomy, and it was decided to perform gastrotomy. It had been ascertained by previous experiment that the readiest mode to secure the stomach, and in the best position, was to incise along a line drawn from the outer border of the left nipple to the outer border of the spine of the pubis on the same side. An incision was made along this line for about three inches and a half, beginning about an inch below the costal cartilages. The outer border of the rectus muscle was easily hit; no muscular fibres were divided; only a little venous hemorrhage occurred; and the stomach was easily caught, and at once drawn through the opening by the finger and thumb passed into the peritoneal cavity. The stomach was brought into connection with the side of the wound by sutures, the rectus muscle being included in the sutures, and the edges of incision above and below brought together by needles.

He was then fed for five days by enemata, and afterwards by the stomach. Forty days later he died from bronchitis. At the post-mortem examination firm and complete union was found between the stomach and the abdominal wall.

SUPPURATING HYDATID CYSTS IN THE THIGH—DEATH.—The following case was under treatment lately at St. Thomas's Hospital. The patient was a strong, healthy-looking man of 45. About two years previously he had hurt himself in the left femoral region, and soon after noticed a tumor in this locality, which grew at first slowly, later rapidly, and caused swelling of the foot and leg.

On examination, a distinctly fluctuating tumor, about the size of a fetal head, was found situated in the left Scarpa's triangle. The size of the swelling remained unaltered whether the patient was standing or recumbent. There was no impulse on coughing. He could bear his weight on the affected limb. There was no tenderness in the spinal region, and pressure in the iliac fossa caused no discomfort. There was no aneurismal pulsation or bruit, moderate manipulation gave little pain, but rough handling caused much suffering. After the patient's admission the tumor became more and more inflamed, and was finally evacuated, yielding four pints of purulent fluid, loaded with hydatid cysts. A few days later the patient succumbed.

Post-mortem examination showed nothing unusual outside of the tumor.—*Lancet*, June 5.

THE SWEAT-GLANDS (*Boston Medical and Surgical Journal*, June 3, 1875).—Dr. Aubert has published an article based upon observations made by studying the impressions obtained by the application of the hand to sheets of paper impregnated with nitrate of silver, protonitrate of mercury, and various other substances.

These impressions were of two kinds: dotted ones, produced by the hands after being carefully washed, in which each point corresponds to a sweat-gland; and linear ones, produced by the unwashed hand, the lines corresponding to the ridges of the papillæ. By this new method of exploration Dr. Aubert comes to the following conclusions:

The insensible transpiration is performed exclusively by the sweat-glands.

The moisture is due not only to the constant discharge of the perspiration, but also to the presence of the deliquescent alkaline residue left by its evaporation.

The sweat-glands, independently of their other functions, should be regarded as a secretory apparatus attached to the organs of touch.

This last view is of significance in connection with certain facts to which he calls attention: the inequality of the number of sweat-glands in different localities, and their predominance in the palm of the hand and the sole of the foot; the inequality in their activity also in various parts; the persistence of secretion, and of its escape upon the hand and foot in spite of pressure; the relation of proximity of the sweat-glands to the papillæ; finally, the acidity of the sweat at the moment of its secretion, and the alkalinity of its residue.

AN EASY AND EFFECTUAL METHOD OF ARTIFICIAL RESPIRATION IN INFANTS.—Dr. J. B. Mattison presents the following modification of Dr. Byrd's method: The infant upon its back, firmly grasp the outer thigh, the index-finger and thumb encircling, and the inner limb resting on the fore-arm, while the little finger is extended as far as possible up the back to form a fulcrum with the corresponding finger of the opposite hand. In the hollow formed by the thumb and forefinger of the right hand allow the neck of the infant to rest, with the palm under the shoulders and the little finger extending down the back to meet its fellow of the other hand. Now, gently and regularly depress the vertex and inferior extremities as much as practicable below the horizontal, say forty-five degrees, thus facilitating inspiration, and, after a proper interval, elevate them to the same extent, forming a concavity of the chest and thereby forming expiration. Continue these movements without interruption, taking care to permit no impediment to the exit and entrance of air during the upward and downward movements of the head and chest, and also exercising caution against too much lateral motion of the head during their continuance. The conjoined use of Désormeaux's douche, or a little cold water dashed occasionally on the epigastrium, will tend to enhance the efficacy of this method; indeed, its employment does not at all preclude the use of whatever auxiliary measures may be deemed advisable.—*New York Medical Record*.

KOROWIN ON STARCHY FOOD FOR INFANTS.—In the *Fahrbuch für Kinderheilkunde und Physische Erziehung* Dr. Korowin states that a secretion may be obtained from the mouth of a child as soon as it is born, though in minute quantity and with difficulty.

It is generally found to be acid, unless the mouth of the child has been previously washed carefully, when it has a neutral or alkaline reaction. The effect in converting starch into sugar of the secretion of the salivary glands of the mouth and that of the pancreas was obtained by making infusions from the glandular tissue and observing the changes produced upon solution of starch. It was ascertained that till the end of the third week the glandular secretion of the mouth exerts no influence of this kind, though the pancreas does, and always to a much greater degree than the former.—*London Medical Record*.

FORMULA FOR TOOTHACHE.—The following formula, says *The Practitioner*, seems likely to be serviceable, as the creasote will have an anæsthetic action, while the ammonia will act in the same way as bicarbonate of sodium by neutralizing any acid present in the tooth. "Take equal parts of creasote, strong solution of ammonia, and tincture of myrrh. A very *small* piece of cotton wool to be soaked in the mixture and put in the hollow of the aching tooth."

They are such as are made up of two parts of equal shapes. Look carefully at these, and you will perceive that the upper halves of the characters are a little smaller than the lower halves,—so little that an ordinary eye will perhaps declare them to be of equal size. Now turn the page upside down, and, without any careful looking, you will see that this difference in size is very much exaggerated; that the real top part of the

It is stated that there are fourteen hundred medical students in the college of Calcutta, India.

DE LOFFRE, A. A., ASSISTANT-SURGEON.—Granted leave of absence for one month on Surgeon's certificate of disability. S. O. 106, Department of the Missouri, June 21, 1875.

SATURDAY, JULY 10, 1875.

ORIGINAL COMMUNICATIONS.

ON THE TREATMENT OF BRIGHT'S DISEASES OF THE KIDNEY.

BY JAMES TYSON, M.D.,

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Read before the Philadelphia County Medical Society, March 10, 1875.

ALTHOUGH the line of demarcation in the treatment of the different forms of Bright's disease is by no means so sharp as that which modern histology has made in their pathology, it will, nevertheless, facilitate our consideration of the subject, as well as perhaps tend to place treatment on a more rational basis, if I preface a brief recapitulation of the different forms alluded to.

1. In the first place, we have the division into *acute* and *chronic* Bright's disease. The former presents us with a single form, that of *acute nephritis*, the acute tubal nephritis, acute catarrhal and acute desquamative nephritis of certain authors,—which has its most frequent occurrence as a sequel of scarlet fever, and therefore in children; while it also occurs less commonly in adults after exposure, especially while perspiring, to cold and moisture. It is indicated by the presence of dropsy, bloody highly albuminous urine, containing blood-casts and epithelial casts, also sometimes hyaline fibrinous casts.

2. Secondly, we have chronic Bright's disease, which gives us four subdivisions. The first of these is the *large white kidney*, also called chronic catarrhal nephritis, and chronic tubal nephritis, because it involves more particularly the cells lining the uriniferous tubules, and is generally found in continuation of the acute nephritis. The condition, while one of increased nutrition, a true hypertrophy in its earlier stages, and a fatty degeneration in its later contracting stage, cannot be considered an inflammatory one; and therefore I prefer the term *large white kidney* to any involving the idea of inflammation.

In this form of disease we have also dropsy, considerable albumen, at first small hyaline casts, containing an occasional oil-globule or fragment of epithelium, later more copious urine and more numerous small hyaline and oily casts, and finally large hyaline, granular, and oil casts, indicating destruction of the gland, the rate of which may be estimated by the quantity of this kind of deposit.

Next we have the *cirrhotic* or chronically contracted kidney, also called the gouty kidney, and by the German pathologists the kidney of interstitial nephritis, in contradistinction to the catarrhal nephritis, because the interstitial connective tissue is believed to be the seat of the inflammation. Here again I do not think the phenomena are those of a true inflammation, but rather of a nutritive activity in the normally scanty connective-tissue elements between the tubules, to the resulting

fibrillar element of which is also contributed a portion derived from the atrophy of the tubules themselves. A hypertrophy of the muscular coats of the arterioles of the kidney, and perhaps, also, as claimed by Johnson, of the entire arterial system, is also an essential feature.

For the above reasons I prefer, also, to speak of this kidney as cirrhotic or contracted, its small size and hardness being more conspicuous than inflammatory phenomena. In this form there is little or no dropsy; there is an increased amount of urine, with a minute amount of albumen, sometimes, perhaps, not a trace of it; also granular and hyaline casts.

Third, is the *albuminoid* kidney, also called the *bacony* (*speckige*), waxy, or amyloid kidney, the latter term having been applied by Virchow in consequence of an erroneous conception of the nature of the infiltrating substance, he having supposed it to be allied to the starches.

The essence of the disease consists in an infiltration, first of the walls of the blood-vessels, and finally of the tubules and cells themselves, with this peculiar substance, of which the exact composition is still unknown, but which is certainly albuminoid and not starchy in composition. The effect of the infiltration is to give a peculiar glistening translucency to the parts affected, and to impart to them the property of striking a bright mahogany-red color with a solution of iodine.

The disease is commonly found attending an exhausting drain upon the system, whether from local or constitutional disease, and it is highly probable that one of these causes is the extreme albuminuria which attends the large white kidney, so that we find the latter organ often the seat of a secondary albuminoid disease of the capillary blood-vessels. Except under these latter circumstances, albuminoid disease of the kidney is generally accompanied by similar disease of the liver and spleen, which are also enlarged, and by this condition aid in the diagnosis. In this affection the amount of urine is large and correspondingly pale; the amount of albumen, at first small, gradually increases; casts are often absent, and when present are not numerous, and they are usually small, hyaline, and granular, and occasionally oily. Later, we have the same large-sized hyaline and granular casts described as occurring in the large white kidney; and from the latter form of disease it is often impossible to distinguish the waxy kidney before death. Sometimes the casts in albuminoid disease exhibit the waxy lustre of the albuminoid infiltration, and strike also the red mahogany-color with iodine.* But this is by no means invariable, or we would have a means of easy diagnosis.

Finally, there undoubtedly sometimes occurs a pure and simple fatty degeneration of the cells of the kidney, often associated with general fatty infiltration of all the tissues, and especially of the liver and heart, in very fat persons, consumers of

* Care should be exercised to use a watery solution of iodine in testing these casts under the microscope, as an alcoholic solution precipitates the albumen and obscures the field.

alcohol, or the subjects of wasting diseases like cancer and phthisis.

TREATMENT.

It is to be regretted that the advance in the therapeutics of Bright's disease has not been as great as in its pathology; and yet, that treatment is often of the greatest utility, not only in alleviating the suffering and prolonging the life of the patient, but also in promoting recovery, is attested by numerous instances. As already stated, the treatment of the different forms of the disease is by no means so distinctive as their pathology, and, for practical purposes, a division of the treatment into that for the acute and that for the chronic is sufficient, provided that attention be also called to any special modification of treatment required by special conditions.

Treatment of acute Bright's disease.—First, as to the treatment of the acute form. There is no doubt that many cases recover while the conditions of rest, quietude, and warmth are maintained. And it is further certain that, whatever other means of treatment are used, these three conditions are absolutely necessary to recovery. A patient with acute Bright's disease, therefore, whatever its mode of origin, should be put to bed, kept quiet, and warmly covered. I should seldom, however, be satisfied with this mode of treatment alone. The selection of other remedies will depend somewhat upon the severity of the case. If the urine be suppressed, dry cups, or even wet cups, to the loins will so divert the blood as to permit a relief to the stagnation which always exists in the acutely inflamed kidney. These cups should always be followed by a warm, moist poultice to the same region, which, indeed, should be used under any circumstances, whether the cupping is necessary or not. I am in the habit, therefore, of always resorting to poultices, and, if the symptoms are at all severe,—that is, where there is complete or almost total suppression of urine, nausea, headache, or delirium,—of preceding them by cupping. Although at first thought it would seem that the kidneys are quite remote from the seat whence the blood is immediately removed, it must be remembered that we are relieving the blood-pressure in the lumbar arteries which come off from the aorta near the renal arteries, and thus divert the blood from the latter. Under all ordinary circumstances dry-cupping is sufficient; wet-cupping should be reserved for the most extreme symptoms, where the strength of the patient has not been previously reduced. Some care must, however, be exercised in the use of dry-cupping, lest we defeat its end. The object of dry-cupping, as justly observed by Dr. G. Johnson, is to facilitate the movement of the blood through the capillaries into the veins,—to draw the blood rapidly through the part, and thus relieve the pressure of the blood in the renals. To do this, the cups must be removed as soon as there is a decided redness, and placed on another part in the vicinity. By allowing them to remain too long, the blood is stagnated in the capillaries, its onward movement prevented, and there is, therefore, no derivation of blood from the involved organ.

The above means have for their object the direct

relief of the congestion of the kidney. This is not the only indication while the kidney is congested. The congestion, in some instances, is altogether due to an excess of work thrown upon it in consequence of suppressed or deficient action of the skin, and in all cases the carrying out of the natural function of the organ tends to increase any existing congestion. Can the kidney be in any way relieved of this functional irritation? Is there any organ which, in other words, can supplement the kidney? Such an organ is the skin. A second indication, therefore, is to excite the action of the skin. And in fulfilling this lies the advantage already referred to from the maintenance of warmth and avoidance of cold early insisted upon. But we are not confined to these protecting measures. The skin may be made to do the work of the kidney itself, and thus one of the most alarming dangers of Bright's disease, uræmic intoxication, averted, while at the same time the congestion of the kidney is also relieved.

The class of remedies which produce this action are diaphoretics; and, of the internal remedies, none is better than the ordinary sweet spirit of nitre, especially if it be combined with small doses of ipecacuanha. But a more effectual and certain method of accomplishing the same end is by warm baths, or, better still, by the so-called warm or "cold pack," in which the patient is wrapped in a wet sheet and then enveloped in a sufficient number of blankets. Perspiration is thus copiously induced, and when thus caused is agreeable, and never attended by the faintness which sometimes follows the use of the hot-air bath,—another means of accomplishing the same end, which will be further considered under the treatment of chronic Bright's disease. In an ordinary severe case of acute Bright's disease, a single pack of this kind will remove all symptoms which may cause anxiety, and happily inaugurate the convalescence, while it may be repeated daily, if necessary.

We may resort to purgatives to the same double end, that of relief of congestion and a complemental action of secretion, and to a certain extent these should always be employed. But the reason for which I primarily employ a purgative is less for either of these objects than for one which I deem even more essential, and that is to promote the action of other remedies, a purpose which applies not only to the treatment of Bright's disease, but also to all diseases. It is a well-known fact in the absorption of fluids, which is borne out by the phenomena of osmosis, that this does not take place rapidly when the blood-vessels are congested and there is a slowly-moving current.

The beautiful experiment of Magendie, which consisted in injecting into the peritoneal cavity a colored fluid, which at first was not appreciably absorbed, but which, on opening a blood-vessel, disappeared rapidly before his eyes, is sufficiently to the point in illustration. The treatment of any case of acute Bright's disease is therefore well commenced by the use of a cathartic, and after its effect the prompt action of other remedies may be looked for. Indeed, it is quite useless to administer diu-

retic remedies before some action is obtained from the bowels, as they will be many hours in producing their effects; whereas after such influence they will be as many minutes. Beyond this end I am not in the habit of giving purgatives in ordinary cases of acute Bright's disease. But there is a condition in which the eliminative action already referred to is often of signal service, and that is the one of uræmic coma and convulsions. Under these circumstances, when the patient cannot be made to swallow, and decided and prompt effect is desired, a couple of drops of croton oil on the tongue have many times saved life by inducing prompt and decided purgation.

Nothing has been yet said of the use of diuretics, which are, perhaps, the first means thought of by most practitioners in the treatment of Bright's disease, acute or chronic, and, no doubt, in many cases they deserve an early consideration. Yet the propriety of their use has been much disputed, and at first thought there would seem to be legitimate objection to them in the treatment of acute nephritis, for with the idea of increased secretion of urine is generally associated that of an increased flow of blood to the kidney. And the question naturally arises, Shall a kidney already congested and inflamed be further jeopardized by crowding more blood into it? On the other hand, it is well known that convalescence in a case of acute Bright's disease which has been left to recover without treatment is always ushered in by a most copious diuresis. This is usually explained by the fact that urea itself is a decided diuretic, as may be shown by injecting it into the blood-vessels of any animal, —an operation which is followed by copious diuresis. In the early stages of Bright's disease the urea and other organic constituents are retained in the blood, and when the circulation through the kidney becomes free, they exert their diuretic action. It will be observed, however, that this takes place only after the circulation becomes free, and it must be looked upon, therefore, not so much as a cause as a result of an improvement in the condition of the organ. Nevertheless, to facilitate such a condition of affairs as copious secretion of urine, and with it the elimination of those effete matters the accumulation of which constitutes the chief danger of Bright's disease, —uræmia, —can only be considered desirable if it can be done without exciting congestion of the kidney. The secret in the proper use of diuretics lies in the selection of such as effect their object without producing a congestion; and such there are. To understand this properly, it must be recalled that the secretion of urine is largely a process of filtration, a process of squeezing out the water and dissolved elements by pressure from behind, and that this is accomplished in the Malpighian bodies by the agency of the arterial pressure and the force of contraction of the heart. It must be remembered that there are two sides to the renal capillary circulation, an *arterial* side and a *venous* side. The first consists in the afferent arteriole and the capillary ball contained in the dilated end of the convoluted tubule and forming with the latter the Malpighian body; the second,

of the capillary net-work formed by the splitting up of the efferent vessel after it leaves the Malpighian capsule and closely embraces the convoluted tubules. The area of this is great, and the movement of the blood slow. As a consequence, a condition favorable to increasing the blood-pressure in the Malpighian body exists. Such pressure is obtained by increasing the force of the heart's contraction, or increasing the arterial pressure by the introduction of fluids within the blood-vessels. The effect of this is to produce a more rapid filtration; that is, more water is squeezed out from the blood-vessels into the Malpighian capsules, whence it is carried downward in the tubules. Now, whatever remedies increase the force of the heart's action or the arterial pressure by absorption of fluids will increase the amount of water thus filtered out. Such remedies are digitalis, the salines, and diluent drinks generally, —digitalis by increasing the force of the heart's action, the salines and diluents by increasing blood-pressure through their absorption. Digitalis is certainly the diuretic most to be relied upon, and when combined with the salines, freely diluted, affords a powerful lever for good. It is necessary, however, to have a reliable preparation, and unless one is sure of the quality of the tincture it is best to use a freshly-prepared infusion. At the same time it is also true that much smaller doses of the tincture are usually given than of the infusion. Thus, of the latter, $\frac{f\text{ss}}$ is often administered, equivalent to three and three-quarter grains, while eight minims or sixteen drops of the tincture, equivalent to one grain of the powder, are considered a full dose, a discrepancy which must account for at least a portion of the diminished effect of the tincture. Digitalis should therefore be given in sufficient quantity, — $\frac{f\text{3i}}$ of the infusion to children, and $\frac{f\text{ss}}$ to adults, —repeated every three hours until an appreciable effect is produced on the rate of the pulse, when it should be diminished. Not until then can you look for a diuretic action. Digitalis, when thus administered, should, of course, be watched, and the patient should be seen twice a day until an effect is produced. Of the alkalies with which it may be combined, acetate of potassium and citrate of potassium are to be preferred. Their diuretic action doubtless depends upon the impetus they give to the osmosis of fluids which hold them in solution, thus increasing the arterial tension and contributing to the flushing of the kidney. Half a drachm of the potash should be given every two or three hours to adults, and ten grains to children. There can be no doubt that an increased filtration of water into the Malpighian capsules aids the separation of the organic constituents in the second capillary net-work referred to, both by facilitating osmosis on the principle of the more rapid current, and by washing out of the secreting cells of the convoluted tubules the organic matter already excreted by them.

By such means as these, after the unloading of the blood-vessels by the action of a purge, we may greatly serve our patient through diuretics. On the other hand, turpentine, cantharides, copaiba, and the class of diuretics which produce a congestion and stagnation of blood in the second or venous

capillary net-work, are mischievous, and should not be employed.

It should not be omitted to mention that fomentations of a strong infusion of digitalis (3i to a pint) applied to the abdomen or lumbar region are often efficient in producing diuresis when other means fail.

Treatment of chronic Bright's disease.—There is always an intermediate stage between that of acute nephritis and the condition of the large white kidney from which recovery often takes place, which calls for a modification of or an addition to the treatment described for the acute, and which is indicated by an impaired quality of the blood, due partly to the gradual accumulation of effete matter, and partly to the drain upon the system which a copious albuminuria certainly induces. But, as it is a condition growing out of the prolonged presence of the disease, it is practically covered in the treatment of the chronic form, and requires therefore not to be separated from it.

The chief indications in the treatment of the chronic forms of Bright's disease are two: *first*, to improve the quality of the blood, which has become anæmic and loaded with urea and allied organic compounds; and, *second*, to combat the symptoms and complications which form a source of great inconvenience, and even danger, to the patient.

The first of these indications is chiefly fulfilled by the use of iron, quinia, and strychnia, nourishing food, and proper hygienic influences; and also by depurating the blood of its retained urea. The well-known Basham's mixture, really a solution of acetate of iron, made by adding to tincture of the chloride acetic acid and the solution of the acetate of ammonia, has the advantage of at least tending to eliminate, while it also restores. But the tincture of the chloride alone is a powerful agent which is always accessible, and, when combined with the sweet spirit of nitre, is perhaps as efficient as the Basham's mixture. To either, the quinia and strychnia may be added if desired; while to the latter the infusion or tincture of quassia makes a compatible addition.

With regard to *food*, while it is true that an abundance, and of good quality, is desired, a question has properly arisen as to the propriety of using the highly nitrogenized substances, as animal flesh. It is now well determined that the urea formed in the blood and eliminated in the kidneys is derived chiefly from the azotized elements of the food, and that the more nitrogenous food we consume the more work is thrown upon the kidneys; although here too the question is somewhat different if we suppose the separation of the urea a matter of mere filtration, or one of elaboration. But either supposition involves an increased flow of blood to the organ; and, although I cannot speak from any certain knowledge that disadvantage results from the free use of nitrogenous food, I feel that the probabilities from theoretical reasoning are sufficiently strong to make it proper for us to be influenced in practice by them. While, therefore, it is not desirable to omit all such food, it is desirable to limit it to moderation, and, while drawing elements of mixed food from the

vegetable kingdom, to make up the deficiency in meats by the free use of milk. There is reason to believe the milk-treatment of cases of Bright's disease to have been of signal advantage in certain instances, and it is not unlikely that it depends upon the smaller proportion of nitrogen contained in it, compared with a corresponding quantity of meat.

Under hygienic measures are included a proper use of clothing and exercise. That the former next to the body should be of *wool* is absolutely essential. For it must be remembered that, on the one hand, the skin is a powerful adjuvant to the kidney in its eliminating operations, and, on the other hand, that any interference with or suppression of the action of the skin must throw more labor on the kidney. Cold is the agent which produces such suppression, and warmth the means by which the action of the skin is encouraged; and no texture prevents the former or secures the latter more effectually than wool.

For the same reason, while the maximum amount of fresh air is desirable, cold and dampness should be avoided or sufficiently guarded against. Many a case of chronic Bright's disease, often previously undiscovered, has been brought to its fatal termination by the action of cold, and especially of cold and moisture combined. Hence, too, there is no doubt that residence in a warm and equable climate is often of signal service in cases of chronic Bright's disease; and cases are reported where albumen has disappeared and recovery apparently taken place in a warm climate, where their previous duration was such as to make recovery highly improbable.

It is doubtful whether other measures than the above are necessary in cases of *contracted kidney*, where the external symptoms of the disease are often so trifling that they have never been observed by the patient; while the discovery of the presence of the disease is often accidental, as where the patient consults his physician for an inexplicable weakness, and the latter in exploring the case discovers albuminuria and casts. In these cases the complication of dropsy seldom occurs; and the extent to which life may be prolonged by suitable care may only be limited by its natural termination. On the other hand, such a person, with the disease undiscovered and uncared for, is in hourly danger from the uræmic intoxication which a shower of rain or a period of unusually prolonged mental and bodily fatigue may cause.

It is more particularly in the *large white kidney*, and the later stages of the *albuminoid organ*, that more decided measures are called for to depurate the blood of its accumulated impurities, as well as to combat the symptoms which cause inconvenience or jeopardize life. These symptoms are those of dropsy, effusions into the serous cavities, and congestions. Such patients are usually confined to the house, or go out of it at such great inconvenience as to make it intolerable to do so. Of dropsy there is abundant evidence to the naked eye; but of the necessity of depuration there is unfortunately no direct means of estimation except by a volumetric analysis of urine, which involves so much trouble and care as scarcely to be possible to the general

practitioner. Fortunately, however, the means which are best calculated to relieve the one are most likely to relieve the other. These measures are, in addition to diuretics, such as promote a more decided action of the skin than any yet alluded to, and certain purgatives.

With regard to diuretics, nothing need be added to what has been already said, bearing in mind that digitalis is our most powerful lever. But with regard to measures which promote a decided action of the skin, I desire to add a little more. These are the "warm pack-bath," and the hot-air bath already alluded to. The latter, in consequence of its more ready application, is to be preferred whenever it can be borne. I have recently, in my wards at the Philadelphia Hospital, used considerably the hot-air bath, and made some observations to determine its value; the results of which satisfied me that we have a much more useful agent than many of us have suspected. A patient with large white kidney was under my observation for more than a year. During a portion of this time his urine was carefully measured, and a portion of the twenty-four-hours' urine analyzed for urea by Liebig's volumetric process, which was repeated to insure accuracy. He was a very large man, passing copiously of urine, and the quantity thus arrived at was 540 grains; the total quantity of urine being 2000 cubic centimetres ($66\frac{2}{3}$ f 3). He was then ordered a hot-air bath daily, during which he perspired most freely. The twenty-four-hours' urine was of course diminished; but on estimating the urea in the twenty-four hours after the sweating had been continued three days, it was found to be 714 grains in 1700 cubic centimetres ($56\frac{2}{3}$ f 3) urine,—actually an increase over the amount secreted when not under the baths. This can be accounted for by the increased celerity of the circulation which would naturally result. If we add to this the amount of urea contained in the increased perspiration, which was of course not determined, on account of the difficulties of collection, we will perceive how powerful a means of depurating the blood of its urea is thus at our disposal; and I am quite certain that if the use of the hot-air bath were more common our power over Bright's disease would be greater. There is a common impression that it is troublesome and difficult of application. But this is not the case, as may be seen by the apparatus I exhibit, being that in use at the Philadelphia Hospital. Sometimes, however, these hot-air baths are not well borne by patients; they do not perspire, and the head and face become flushed, and the former throbs and aches. Under these circumstances the warm pack already described may be used instead.* It is perhaps equally efficient, but is more troublesome. It may be objected that these means are exhausting to the strength of the patient; but I think they will be found less so than is commonly supposed; the strength of the patient may, however, at the same time be maintained by iron, tonics, and milk.

The use of *purgatives* for depurative purposes and to reduce the dropsy has long been common in the treatment of chronic Bright's disease, and to this end it has been common to select a peculiar class of purgatives, viz., those which produce profuse watery evacuations, as elaterium, scammony, gamboge, and jalap. In addition to the indications to relieve general venous congestion with a view to promoting absorption, the advantage to be derived from the use of a brisk, prompt cathartic has already been alluded to in speaking of the treatment of acute Bright's disease. But it must be remembered that in the circumstances now under consideration it is not a temporary cause the effects of which we desire to obviate, but a constantly acting one, so that to be of service the purgative must be continued day after day, or every other day at least. Now, such use of the hydragogue cathartics above mentioned cannot be continued for any length of time without materially reducing the strength of the patient much more decidedly than through the daily sweat. I do not deny their effect in diminishing the dropsy. On the other hand, I have many times observed this effect, and in some I have observed the dropsy totally disappear,—but with it the strength of the patient to such an extent that as the dropsy subsided the life of the patient went out with it, so that it might truly be said that had the patient lived a little longer the dropsy would have been cured. I am not, therefore, very partial to the continued use of cathartics in chronic Bright's disease. But it must be remembered that it is to the prolonged use that I refer. To relieve a sudden emergency, as the occurrence of uræmic symptoms, —in a word, under the same circumstances under which I would use them in *acute* Bright's disease if they could be administered, would I give them. Of the remedies mentioned, undoubtedly the one which most strikingly produces the desired effect is elaterium. The profuse painless discharges which it effects in doses of one-twelfth to one-sixth of a grain are well known, while the small quantity required makes it peculiarly easy of administration.

But in most cases of chronic Bright's disease, except the chronically contracted kidney, a stage is finally reached at which all treatment of the kind described fails to relieve the dropsy, which becomes eventually the sorest burden of the malady. The body becomes greatly increased in weight, the integument of the extremities is stretched almost to bursting, and sometimes it does rupture, when it is attended by a leakage, which, although in one way inconvenient, is in many senses a great relief to the patient, by diminishing the tension referred to. Acting upon this, physicians have long been in the habit of puncturing the swollen parts to produce the required leakage. In my early experience I once had such horrible results in the sloughing away of the entire scrotum of a little child with scarlatinal nephritis, after I had punctured it, that I declared I would never repeat it. But as other cases came under my observation my prejudices thus excited gradually disappeared, and I now resort to puncture when it seems likely to give relief. It only remains to determine the best method of per-

* Since reading the paper, a member of the Society has suggested the propriety of tying a wet handkerchief about the head, as is done in the Turkish bath, with a view of preventing these unpleasant head-symptoms; and it is not unlikely that it would prove an efficient agent.

forming the operation. It is a common practice to make a number of minute punctures with a needle or sharp-pointed bistoury. Dr. George Johnson, of London, recommended making a free incision half an inch long, just above the outer or inner ankle of each leg, and deep enough to enter the areolar tissue beneath the skin. This may be done with a bistoury; but Dr. Johnson used an instrument mounted like a spring-lancet, which he recommends as more efficient and less painful than the repeated fine punctures. He relates an instance which is so remarkable and so admirably illustrates the possibility of recovery when the symptoms have reached an advanced stage, that it is quite worthy of re-narration. In July, 1861, he saw a clerk, aged 22, who had suffered from general dropsy since the end of March, after exposure to cold. The urine became nearly solid with acid and heat, while it contained *numerous oily casts*. Purgatives and diuretics failed to lessen the dropsy, and at the beginning of September the swelling was so great that the skin cracked and water oozed through the fissures. The legs were now incised; a copious discharge of water occurred, and the urine became more copious. From that time he steadily improved; the dropsy passed away, and gradually the urine ceased to be albuminous; but it was not until the end of April, 1862, more than a year from his illness, that all traces of albumen had disappeared. The chief medicinal treatment after the incision of the legs was the use of tincture of perchloride of iron three times a day, and a dose of broom-tea in the morning. Such recoveries as this are rare, while their possibility shows the value of hopeful perseverance in treatment. I have never seen the instrument referred to, but have made the large incisions with satisfactory results, although I can point to none so satisfactory as Dr. Johnson's.

With regard to specific methods of treatment, none are of any avail, and, so far as they ignore special indications, they are mischievous. I have heard of calomel being used for long periods to the production of its specific effects,—for what object, except to hasten the blood-dyscrasia which is the ultimate cause of death, I cannot say. It requires to be mentioned only to be deprecated.

The use of *opium* requires to be alluded to. The caution which has always been suggested in its use I believe to be in the main a wholesome one, and I should prefer to produce hypnotic, sedative, and antispasmodic effects by chloral and the bromides whenever it is possible. I am sure I have seen death accelerated in one case of previously unsuspected chronically contracted kidney in which large doses of opium were exhibited for another purpose,—overdoses, in fact, but quite insufficient of themselves to produce the fatal result, which was preceded by uræmic stupor. After death the urine was drawn by a catheter and found to be albuminous, and a post-mortem examination revealed a contracted kidney. On the other hand, I would not omit the use of opium where there was decided indication for its use to allay pain. It is well known that Professor Loomis, of New York, treats with apparent success cases of uræmic convulsions with hypodermic injections of large doses of morphia (one-half grain

or more),—doses which I would fear to use under ordinary circumstances in the absence of renal disease. A method, however, suggested by so high an authority as Dr. Loomis merits a trial, which I should be glad to give it under appropriate circumstances.

CROUP AND DIPHTHERIA.

BY JOSEPH G. RICHARDSON, M.D.,

Microscopist to the Pennsylvania Hospital.

ALTHOUGH the doctrine of the identity of these two diseases has been ably combated by my friend Dr. H. Hartshorne in the *Medical Times* for June 27, yet so pernicious does this error, as I deem it, appear to be, that I feel impelled to add a few words to his testimony. The obvious dissimilarities, and, indeed, contrasts existing between croup and diphtheria, are so evident in marked instances, that I can only account for an observer of even average ability confounding them, by supposing that he has fortunately met with the latter malady infrequently, and then in a mild form and as a chiefly local manifestation. To one who has been called upon to treat hundreds of cases almost every winter, as I was obliged to do near my former residence in Cayuga County, New York, the mistake seems on any other supposition quite inexplicable.

In several of my fatal cases there was no croupy cough, no suppression of the voice, and no distressing dyspnoea,—death occurring from simple asthenia; in one of which I have notes, the hoarse cough, indicating the supervention of croup, came on only twelve hours before death, when the patient was actually moribund, and after the whole faucial region, and even the roof of the mouth, was thickly coated with false membrane; whilst in another, upon which I performed tracheotomy, the symptoms of croup supervened on the sixth day, ninety-six hours before the fatal issue.

The most conclusive example I can bring forward, however, is that of a child some three years old, who was treated so severely for diphtheria by rubefacients to the neck as to produce vesication. When the little patient succumbed, several days afterwards, the pharynx and larynx were *quite clear of deposit*, but the abraded surface around the neck exteriorly was *thickly covered with diphtheritic membrane*. I did not see this patient myself, but his condition was minutely described to me by three eye-witnesses, viz., the father of the child, the irregular practitioner in attendance, and a neighbor who sat up with the little sufferer, and who, by the way, took the disease, and was very ill with it under my care for more than a week, but finally recovered. I am satisfied that the affected infant presented the phenomena just narrated, and have always felt we could hardly hope to obtain a more conclusive proof of the difference between pseudo-membranous laryngitis and true uncomplicated diphtheria.

The characteristics upon which my experience has taught me to rely chiefly in making a differential diagnosis between these two maladies are, besides

the aspect and seat of the false membrane,—1, the astonishing and immediate prostration of strength in diphtheria; this I have seen profoundly marked before any throat-affection was manifest; 2, the comparatively low temperature, as detailed in my paper on Diphtheria, in the *New York Medical Record*, quoted by Flint in his *Practice of Medicine*, p. 940, and Wunderlich, *Clinical Thermometry*, p. 368; 3, the strong contagiousness of diphtheria, which I have seen exemplified in scores of instances; 4, the fact that diphtheria is common in adults, whilst croup is extremely rare; and 5, the therapeutic test of the remarkable control which chlorate of potassium and tincture of chloride of iron exercise upon most cases of diphtheritic complaints. Lastly, the subsequent appearance of the curious forms of diphtheritic paralysis may enable us to solve the problem in some doubtful cases.

1835 CHESTNUT STREET, Philadelphia.

NOTES OF HOSPITAL PRACTICE.

KING'S COLLEGE HOSPITAL, LONDON.

SERVICE OF SIR WILLIAM FERGUSSON, BART.

Reported by JOHN B. ROBERTS, M.D.

TENOTOMY FOR THE RELIEF OF TALIPES EQUINUS.

THIS boy, aged 16, presents a well-marked case of a very common distortion of the foot, namely, talipes equinus; that is, the heel is drawn up, and he walks upon his toes. Deformities of the lower extremities have, no doubt, always been common, but the remedy is of recent date, for it is not many years since the operation of tenotomy for the cure of club-foot was looked upon as a great novelty and was the source of much curiosity. In this instance, as you see, the left heel is drawn up and the foot turned somewhat inward, while the toes, especially the first and fourth, are pulled up by the extensor muscle. At the same time the calf of the left leg is smaller than that of the right, and has a wasted appearance.

It would appear as though the tendo Achillis were at fault in these cases; but this is not necessarily so, for the distortion is probably due to the calf-muscles, and not to a short tendon, though in the treatment we usually divide the tendon in order to let the heel come down.

In this case, the tendons of the extensor digitorum shall first be divided, to allow the toes to be straightened, which is readily done by introducing the tenotome and cutting subcutaneously the tendon going to the great toe and that of the fourth toe, since the other toes do not demand the operation. Then the foot is grasped by the assistant, who makes the tendo Achillis tense, and the knife of the operator introduced flatwise is turned against the tendon, which is cut with a snap. This allows the foot to be pulled into position, and there can be felt as much as an inch of space between the two ends of the severed tendon; which interval will subsequently become occupied by analogous tissue uniting the parts.

The tendo Achillis is very often divided; but this case is somewhat different from usual instances, in that the extensors of the toes had to be cut, an operation not often required, though a very valuable procedure in certain classes of distortion. A pad is now placed over each puncture, and secured with adhesive strips, after which the whole foot is surrounded by a bandage.

SERVICE OF MR. HENRY SMITH, F.R.C.S.

TREATMENT OF HEMORRHOIDS BY THE CLAMP AND EXCISION.

This woman, when she entered the hospital, presented a very bad case of internal hemorrhoids; but to-day the tumors are smaller and less inflamed, because she has been kept quiet in bed for some time past. Nothing short of some form of operative procedure will relieve her; and therefore the tumors shall be excised.

A leather band is buckled around her right wrist, and another to her foot, one band having a ring, the other a hook attached. The leg having been bent, the two bands are hooked together, thus holding the limb out of the way during the operation. The finger, introduced into the vagina, turns the hemorrhoids out of the anus so that they can be grasped by the forceps. When this is done, the ivory clamp is applied to the mass and screwed up, then the tumor is cut off with the scissors, and the actual cautery applied to the cut surface to seal up the vessels before the clamp is removed. Another mass is drawn forth, and the clamp applied, but, being small, it is merely seared with the iron without being excised first.

This having been done to three separate masses, an opium suppository is introduced. The bowels shall be kept quiet for four days, after which a cathartic shall be given; and in a week the patient will probably be discharged from the hospital.

This operation for the cure of hemorrhoids is simple, safe, quick, and effectual. The clamp consists essentially of two flat pieces of ivory arranged like a pair of scissors, with a screw which holds them firmly together when the pile has been seized between their edges. The object, of course, is to prevent hemorrhage after the excision, and to protect the adjacent parts during the application of the cautery. By this method the ordinary dangers of the operation are avoided, for hemorrhage is prevented, and there is no danger of pyæmia, because the mouths of the vessels are sealed up by the cautery.

In four or five hundred operations Mr. Smith has never had a case of pyæmia, and has never been obliged to plug the rectum for hemorrhage.

It has been asserted that stricture is likely to follow this operation. This might be so if a large portion of skin were cut away; but only the mucous membrane should be excised. Mr. Smith has never seen a case where stricture followed; and in one case, where, after death from another cause, an examination was made, no stricture whatever was found. In those instances in which it is necessary to excise a large portion of the skin, it is well to use the bougie to dilate the orifice during the after-treatment, and thus to prevent the occurrence of contraction.

IMMOVABLE APPARATUS IN ACUTE ARTICULAR RHEUMATISM.—Dr. S. Scapari concludes from his experience that immovable apparatus made either with plaster of Paris, silicate of potassium, or starch, are exceedingly useful when applied to the affected joints in acute articular rheumatism, although they certainly have no influence upon the disease itself. If on the appearance of the first symptoms these applications are made to all the joints, sound and affected, they seem to exercise an abortive effect, preventing the appearance of the affection in some of the joints, and calming and arresting the manifestations already developed in others. Dr. Scapari even goes so far as to assert that the spread of the disease is diminished, as well as the probability of concomitant complication on the part of the serous membranes, the heart, and the lungs.—*Bull. Gén. de Thérap.*, No. 10, 1875; from *Raccoglitori Medico*, No. 3, 1875.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

CHEAP JOHN.

WE once heard an anecdote of a celebrated German millionaire who, when asked at a dinner in London to select between some tempting Southdown and a fine haunch of venison, curtly replied, "I never takes the deer when I can have the *sheep*." Our medical confrères across the Alleghanies evidently endorse the above views.

Some attentive friend has sent us a flaming annual announcement and catalogue of the Missouri Medical College, Session 1874-75, cover "couleur de rose," full of promise, we will hope with no lank performance.

This announcement savors of the modern display-advertisement style, and we looked for the mysterious four-leaf clover with which a certain ingenious firm inveigle the *imberbis juvenis* of our country. We have no doubt that the opportunities for clinics, the material for medical instruction, are all that are vouched for in this unique circular. We say circular, for the advertisements of certain hotels and peculiarly-colored passenger-cars induce us to fear that our shrewd confrères, to diminish the expense of the printer, have entered into a compact with certain proprietors of hotels and stockholders of passenger-cars. This, however, is only *business*. Our heartfelt, earnest protest is against the cheapening of medical education, of which this announcement is a remarkable characteristic:

"The faculty have for thirty years maintained the old fee of \$105. They have done this up to

last year, notwithstanding the schools in every other city west of the Alleghanies reduced them years ago. At a recent meeting of the representatives of the faculties of many of these schools, in Detroit, the Missouri Medical College again advocated the old rates, but the schools which first reduced them declined to make any change. In reducing the fee, the faculty have placed the superior advantages of this school in reach of many who have hitherto been deprived of them by pecuniary considerations. They, therefore, do so *cheerfully*, and at a time the most prosperous in the history of the College. Fee for full course of lectures, \$50."

O tempora! O mores! Such are the results of twenty years' labor of the American Medical Association! Such is the trans-Alleghany endorsement and appreciation of the untiring, self-sacrificing efforts of one of the oldest medical colleges of our country to double her corps of professors, to increase the number of her chairs, to raise the standard of preliminary examinations, to extend her curriculum,—in other words, to raise the status of the medical profession, and to send forth sound physicians, polished gentlemen, conscientious men.

In the dim future, should our Western brethren still persist in their levelling propensities, we may look forward to an annual announcement of some medical school appended to Jayne's Almanac, with the following programme:

"THE OI POLLOI MEDICAL COLLEGE, SESSION
 1884-85.

"Anatomy, physiology, practice of medicine, surgery, obstetrics, and materia medica at prices to suit the times.

"Dissecting-room tickets half-price; babies alone dissected. Hospital and quizzes gratis.

"Tickets to the college, in yellow-colored cars, gratis. Meals provided at the 'Great Hygienic Hotel,' in Red Lane.

"Students forming clubs of ten taken at reduced prices. Married students are permitted to substitute their wives as attendants upon the lectures at their option. Students may still further diminish their expenses by offering themselves or members of their families, when indisposed, as subjects for the clinics. Should any student fail to pass his examination, fee refunded. The faculty, however, pledge themselves never to place their candidates in so embarrassing a position. Prof. Shrewdem will, at his convenience, give a lecture on the American view of the Monroe doctrine, in opposition to the late Professor Munro, of England."

"Spectatum admissi risum teneatis, amici?"

LEADING ARTICLE.

THE VIENNA TREATMENT OF UTERINE HEMORRHAGE.

DR. CARL v. ROKITANSKY, Jr., may fairly be regarded as a representative of the German, or at least of the Vienna, school of gynæcology. If we examine, therefore, his most recent utterances on the subject,* we may expect to get a reasonable idea of what advances our German brethren are making in the treatment of this class of affections, and wherein their methods differ from our own.

Two indications for treatment in general are pointed out by Dr. Rokitsansky: first, to stop the excessive hemorrhage of the moment; second, to prevent its return. The general treatment to fulfil these indications must consist in the exhibition of repressive medicaments and in the administration of a proper regimen, while the local therapeutics should be directed towards a pharmaceutical effect upon the vaginal or uterine mucous membrane on the one hand, and against the exciting causes of bleeding in the uterus on the other.

One of the most important points in the treatment of uterine hemorrhage is rest,—rest in the horizontal position, with raised hips, the coverings not too warm, no movement, not even in emptying the bladder or rectum. All excitement is to be avoided; the food and drink are to be of the simplest character: roast meat and ice-cold soda-water are the best nourishment. The chamber should be kept at an even temperature and supplied with plenty of fresh air. Everything which can cause congestion of the pelvic organs is to be avoided.

In what is called active uterine hemorrhage, particularly metritis hæmorrhagica, cold in all forms is to be avoided, because, while its transitory application tends to cause congestion, its continuous employment is not to be thought of. The application of frequently-changed cold compresses to the abdomen is, however, to be recommended. In these cases the plentiful application of leeches to the lower portion of the abdomen, or even to the vagina itself just before the menstrual period, is often extremely effective. In light cases these means, combined with mild laxatives and tonics, will place the patient in an improved position; and these precautions should be taken by all women liable to hemorrhage at the menstrual period.

In menorrhagia, which is simply the expression of general debility, marked improvement follows the use of tonics, and particularly preparations of iron. When the loss of blood is not due to uterine disease, improvement of the skin's action, strengthening of the general health, and regulation of the bowels aid greatly in the cure. A systematic course of hydro-therapeutics is often of great benefit in these cases. In all severe cases of profuse hemorrhage, which tend rapidly to anæmia, it is indispensable, during the intervals, to stimulate the strength of the patient to the utmost degree possible.

In what is called passive hemorrhage, which is by far the most usual form of profuse menstruation, and which, by lasting weeks, or even months, brings the patient almost to dissolution, cold may be used with propriety. This means, however, frequently fails, and the physician is constrained to employ pharmaceutical or occasionally mechanical applications to the uterine mucous membrane. The medicaments used for this purpose are astringents, or more usually caustics. These are used in the solid or the fluid state. The use of powders has been of late almost entirely given up. Of the various medicaments, none can replace nitrate of silver. The others are usually tardy in their action, and often produce untoward symptoms (as the uterine colic brought on by the mixture of alum and sulphate of copper).

Whether or not the speculum is used in making these applications, their use should always be preceded by examination with the uterine sound, in order to ascertain as exactly as possible the situation, the condition, and the irritability of the uterus.

Dr. Rokitsansky recommends the use of the lunar caustic in considerable quantity: if a small piece is used it is wasted in coagulating the blood, and does not reach the mucous membrane itself. He never uses the caustic until the cervix has been dilated. Slight pain is caused by its use, which usually lasts only a few minutes, occasionally an hour or so. Nausea, and even vomiting, may occur. Very exceptionally the pain may last a day or so, or give rise to feverishness. Dr. R. has only in a single case observed the supervention of dangerous symptoms. One precaution should be observed, particularly in walking cases,—that is, not to cauterize too energetically the first time. The irritability of the uterus should first be tried, and if there is a tendency to uterine colic it should gradually be accustomed to the application.

As to the method of applying the caustic: after the cervix is dilated sufficiently, and the uterine axis brought as nearly into a normal position as possible, a stick of caustic, perhaps an inch long, is introduced by a sidewise motion, either by means of forceps or on the end of a quill from which, after the caustic is placed in position, the latter is broken off. The introduction must be rapid, or the inner cervix may close before the caustic is completely introduced.

A cylindrical speculum of hard rubber is preferred by Dr. Rokitsansky, who advises also that no effort be made at forcing it into position. If, for any reason, this cannot be employed, a "porte-caustique" or "uterus pistole" may be used. In most cases cauterization one, two, three, or four times every second, third, or fourth day will control the hemorrhage. Relapse may be prevented by the use of extract of ergot. Digitalis, tincture of cannabis Indica, rue, savin, etc., are nearly useless.

Two methods of cauterization with fluids may be used: either cotton-wool soaked in the medicament and introduced by any of the ordinary instruments through a rubber speculum, or intra-uterine injection. The latter method is highly praised by many authors, who, at the

* "Ueber Gebärmutterblutungen und deren Behandlung," *Wiener Klinik*, 1 Jahr., 4 Heft, April, 1875.

same time, warn against the evil effects which may easily follow. The best guarantee against such effects is the continuous patency of the entire cervical canal, and this can best be obtained by previous dilatation with sponge tents or laminaria. This of course allows free exit to the injected fluids, and prevents the danger of their being forced into the Fallopian tubes. In addition to this precaution, it is necessary to inject no more than three, four, or at most six drops at any one time, and to inject only very slowly, and drop by drop. By this means the danger is reduced to a minimum.

These injections, as well as any kind of cauterization of the uterus, are to be avoided only when there are inflammatory processes in the uterus or its adnexa, or in its immediate neighborhood. Version or flexions of the uterus are not to be regarded as contra-indications, but call for the greatest care. Among medicaments, neutral liquor ferri sesquichlor. and tincture of iodine are the best.

When the porte-caustique is used, the patient should lie on her back, with the hips elevated. In making the application by other means, the position may be any of those usually taken. The vagina should be protected by a tampon of cotton-wool slightly impregnated with glycerin.

Recently injections of hot water have been recommended in post-partum hemorrhage by Dr. Windelband; but these have not yet been fairly tried.

Among the mechanical means of arresting hemorrhage, the sponge tent is the most prominent. For instance, if the usual means of controlling uterine hemorrhage fail and a polypus is suspected, the first thing to do is to dilate the cervix and make an examination. Occasionally the use of the tent a single time will in itself put an end to the bleeding; and if the pressure is directly upon some excrescence, this may disappear, removing at once the hemorrhage and its exciting cause.

Dr. Rokitsansky only uses the sponge tent in cases of extreme necessity, and never leaves it longer than six, or at most eight, hours in position.

As to tamponing the vagina with cotton, charpie, etc., impregnated with liq. ferri sesquichlor., this procedure rarely has any lasting effect; and if these tampons are left too long in position, infection, or at least local irritation, may result. Colpeurynters filled with ice-water are better; but where the physician is suddenly confronted with immediately threatening hemorrhage, tamponing as above may be an absolute necessity.

In cases of uterine fibroid when removal cannot be performed, dilatation of the cervix with injection of tinct. iodinii may prove serviceable.

Finally, the hypodermic injection of ergotin is very useful when the hemorrhage proceeds from uterine fibroid.

When the cause of hemorrhage is to be traced to poly-poid growths, these must be removed, if they can be reached by instruments. When they are not attainable, injections of ergotin and the cold douche may be used. Dilatation of the cervix by sponge tent is not to be resorted to unless the strongest necessity exists. Cancerous

growths are to be removed by the galvano-cautery, the sharp spoon, or the actual cautery, followed, when the eschar falls, by Wynn Williams's solution (one part bromine to five parts alcohol). When cancerous nodules still remain after this last operation, the bromide solution may be injected directly into the parenchyma of these tumors.

CORRESPONDENCE.

NEW YORK, June 25, 1875.

A REMARKABLE case of aortic aneurism has lately attracted considerable attention at the Roosevelt Hospital. The patient was a German, 40 years of age, a stevedore by occupation, and admitted to the hospital for the first time in August, 1874. Seven months previous to this date he had fallen through a ship's hatchway, striking upon his back, and probably receiving some internal injuries. He complained of severe pains in the chest, but there was no evidence of any spinal trouble, so far as could be ascertained. After a few days' rest he was able to return to his usual avocation; but in a short time he was obliged to give up continuous work. Up to the time of his admission, however, he was still able to work for a day or two at a time occasionally. When first examined, a distinct tumor was found in the region of the first and second costal cartilages, on the right side, and he complained of constant pain about the sternum and between the scapulæ, behind.

He remained in the hospital, without much change in his condition, until November 9, when he was discharged at his own request. He was re-admitted February 13, 1875, having continued to suffer during the interval from severe shooting pains in the anterior portion of the chest, and a dull, burning pain in the upper part of the spine. The tumor had somewhat increased in size, and a distinct thrill could now be detected in it. About the 1st of June its upper surface began to grow red and tense; and on the 13th it broke spontaneously, and discharged a considerable quantity of pus mixed with dark-colored blood.

On the 19th, the discharge of purulent fluid was enormous, and the patient was rapidly becoming exhausted. About three o'clock that afternoon there was a rupture of the aneurism beneath into the superficial alveus. The house-physician immediately applied a compress, and summoned Dr. Weir, the visiting surgeon, who happened to be in the hospital at the time. By forcible compression with oakum saturated with persulphate of iron solution, the hemorrhage was entirely controlled in about fifteen minutes; but, as the patient's pulse was 144 and his exhaustion extreme, his death apparently could be only a matter of a few hours at the farthest. His condition, however, afterwards improved, temporarily, so that he actually lived until 5.30 on the morning of the 21st.

The autopsy was made the same day, in the presence of Drs. William Draper (in whose service the case occurred), Erskine, Mason, Weir, McBurney, and others.

The heart was found not to be greatly displaced, the apex being about two inches to the left of the median line. This was probably owing to the fact that the left lung was everywhere bound down by firm adhesions. The left pleural sac contained about one and a half pints of sero-purulent fluid. The whole arch of the aorta was found to be affected. Just to the right of the origin of the innominate artery an opening of the size of a small pipe-stem was seen, communicating with an alveus under the sternum; and this had, no doubt, been the immediate cause of death. At a point corresponding to this, the manubrium of the sternum was very badly eroded. The original or main aneurismal sac was situated in the transverse portion of the arch, and on its lower aspect, just opposite the mouths of the innominate, left common carotid, and left subclavian arteries. These arteries were not compressed or affected in any way, and thus the marked regularity of the radial pulse on both sides, which had been noticed, could be accounted for. The distended cavity of the aorta at this point would probably have admitted a moderate-sized foetal head. The sac was filled with soft clots, and over the greater portion of its internal surface old layers of fibrin were deposited. Its walls were everywhere thick and firm.

The descending portion of the arch was so firmly adherent to the vertebræ that it was much lacerated in removing it from the thorax. There were extensive caries and erosion of the second, third, and fourth dorsal vertebræ, and of the corresponding ribs; one of the latter being almost entirely eaten through. The right lung, except being somewhat œdematous, was normal. The left bronchus had been strongly pressed upon, and a section of the left lung showed that it was firmly compressed, and everywhere riddled with abscesses, there being several cavities in it of the size of a walnut.

It is certainly very remarkable that a man should live for thirty-six or thirty-seven hours after the opening of an aortic aneurism; but this is less to be wondered at when we remember that the perforation was caused by ulcerative action, from the external abscess, and not by a proper rupture of the sac, from progressive thickening of its walls; which, of course, almost always necessarily results in instant death.

A month or two ago, a patient at Bellevue is said to have lived for twelve hours after the rupture of an aortic aneurism; but we are not acquainted with the facts of the case.

Since the date of our last letter, the Harlem Flats nuisance has occupied a still greater share of public attention. The white-washing report of the police surgeons has been repudiated by several others of their number, and innumerable have been the petitions, meetings, resolutions, investigations, and letters, to say nothing of the conferences of mayor, aldermen, health commissioners, and commissioners of public works, in regard to the matter. As a result of all this, it was hoped that the grand jury would take some action; especially after a protest had been presented to them, signed by a large number of physicians practising in

the neighborhood of the infected district, and confirming the worst that had been said of the baneful influences of the refuse deposited on the flats; but they declined to interfere in the premises.

Still, the filling-in with refuse matter has been stopped, and the commissioner of public works requested by the board of alderman to cover the flats with a thick layer of pure and wholesome earth.

In the mean while, the health department has been endeavoring to disinfect the pestiferous region with copperas and "dead oil" from the petroleum works at Hunter's Point; but as it is almost a herculean task to deodorize a deposit extending over such a large area, which to a large degree consists, according to reliable medical authority, of apples, oranges, turnips, carrots, pea-shells, potato-peels, hay, straw, manure, and dead dogs and cats, the odoriferous stench still smelleth unto heaven, if one can believe the reports of the unhappy residents of the vicinity.

It is gratifying to know that some of the churches here have been taking up collections for a "fresh-air fund," to provide for short excursions by land or water for the poor during the summer, and a residence of one, two, or three weeks out of the city for those who are most enfeebled. The lead in this matter has been taken by the rector of the Anthon Memorial Church, Rev. Heber Newton, son of Dr. Richard Newton, of Philadelphia, and it is his aim eventually to establish a permanent summer home for the worthy poor, under the auspices of his church.

Nearly \$11,000 has been contributed towards the Floating Hospital of St. John's Guild, but \$20,000 is needed to complete a barge capable of accommodating twenty-five hundred sick children and mothers. In a recent appeal to the public, the trustees say, "No plan for the relief of the sick children of the poor has more practical advantages than the proposed hospital barge. The pure, invigorating sea air, wholesome food, medical attendance, kind nursing, roomy quarters, and healthful recreation, are, through this method, placed at the disposal of both mothers and children, and the time so arranged that the necessary household duties will not be infringed upon. Over fifteen thousand children and mothers were taken out on the eighteen excursions given by the Guild last summer, while hundreds had to be refused for want of the necessary accommodations, which the present effort is intended to remedy. Now the work is to be carried out on a larger scale, and with results, it is hoped, that will tell beneficially upon the health of the entire city."

As a result of the joint meeting of the Public Health and Dwelling Reform Associations, at which Dr. Stephen Smith advocated the increase of suburban homes for working-men, a committee, consisting of Mr. Parke Godwin, Hon. D. B. Eaton, Prof. C. F. Chandler, and Dr. Smith, has addressed a circular letter to the presidents and directors of railroads radiating from this city, to urge the inauguration of a system of cheap morning and evening trains for working-people.

The Park Hospital, near the City Hall, having been

abandoned on account of the insecurity of the building, there is now no adequate house of relief for cases of sunstroke and other accidents in the lower part of the city; and, in view of the advent of hot weather, the Governors of the Society of the New York Hospital have requested the Mayor and Sinking Fund Commissioners to appropriate one of the late station-houses in Beekman or Chambers Street for such a hospital, promising to fit up the building, as well as care for the patients received, at their own expense.

Notwithstanding the energetic labors of the extra corps of vaccinators appointed by the Board of Health, smallpox still continues to prevail, one hundred and twenty-eight cases having been reported during the week ending June 29. The smallpox hospital on Blackwell's Island is entirely filled, and, in addition, quite a number of tents have been erected outside for the accommodation of convalescents. Diphtheria also continues epidemic in the city, over a hundred cases being reported for the same week.

The managers of the Presbyterian Hospital seem at last to appreciate that the profession is in earnest in its demand for an explanation of their late extraordinary action, and have called a special meeting of their board to take into consideration the present state of affairs. Not only have the four newly-appointed physicians resigned, but almost the entire staff of visiting physicians and surgeons are also said to have handed in their resignations.

PERTINAX.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 22, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

Sponge-like bodies from synovial cyst in a cow.

DR. J. C. WILSON presented a number of small bodies evacuated by the spontaneous opening of a large synovial sac on the leg of a cow. These bodies were irregularly spherical in shape, and ranged from a quarter to a half inch in diameter. They looked like small pieces of soft, white sponge. The cyst which contained them was a large one, and had existed four years, without, however, producing lameness. It burst whilst the animal was in the stable, and the quantity of these sponge-like masses that fell out amounted to a quart. A little clear gummy liquid escaped with them. When fresh, they had a strong alkaline odor.

THURSDAY EVENING, MAY 13, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

Double monster.

DR. LOUIS A. DUHRING presented, for Dr. E. E. MONTGOMERY, a double monster, described in the *Philadelphia Medical Times* for May 1, 1875.

Aneurism of the abdominal aorta.

DR. W. G. PORTER presented the specimen, obtained at a post-mortem which Dr. P. made for a fellow-practitioner about three weeks ago. The history was as follows:

"He was called to see the patient, a man about fifty-

seven years of age, about a week before his death, and found him suffering from tympanitic distention, colicky pains, constipation, and vomiting. Under treatment the vomiting and constipation were relieved, but the tympany, though somewhat modified by treatment, still remained, and the patient, who was an old drunkard, sank, and died exhausted."

Post-mortem.—The whole aorta from the heart downwards was the seat of extensive atheromatous change, the artery feeling more like an egg-shell than anything else. Just below the diaphragm a large aneurism was found, almost filled with laminated fibrin; it had eroded three of the vertebræ, and, rupturing on its posterior aspect, had formed a large false aneurism, and had filled the whole of the left side of the pelvis.

Multiple cavernous angioma of the liver.

DR. R. M. BERTOLET presented the specimen, and furnished the following history:

"This unusually fine specimen, unique among the presentations to this Society, was removed from Patrick S., a laborer, æt. 50, a native of Ireland. He died upon April 30, two days after his admission into the medical wards of the Philadelphia Hospital. He was carried off by an acute croupous pneumonia of the right upper lobe; during his illness there was no hepatic tenderness, nor any jaundice, or other symptom manifested to call especial attention to the liver.

"The autopsy, however, disclosed six large dark-bluish spots of considerable size, some of them measuring over an inch and a half in diameter, scattered through both lobes of the liver. These growths are seated in both the anterior and posterior surfaces, most abundantly towards the lower free margin. Their conical or wedge-shaped appearance upon section, as well as their peculiar coloration, led them to be mistaken upon first sight by the resident physician for hemorrhagic infarctions. This mistake is, no doubt, frequently made, since the liver is unquestionably the most favorite seat for these tumors; yet in this site they so far remain unrecorded in our proceedings. A careful inspection with the unaided eye, however, suffices to show that they are actual new growths, with a thin, whitish, reticulated net-work running through them and forming small angular meshes, the cavities of which are filled with dark, coagulated blood; the whole giving to the cut surface an appearance not unlike the alveolated structure of the lungs. The blood can be readily squeezed out from the spongy, cut surface, when the reticulated structure becomes still more evident. In this specimen the tumors, although most of them are directly under the capsule, do not project or bulge above the general level of the surface, excepting one of the largest, which is seated in the lower border, and there presents slight elevations both upon the anterior and posterior surfaces. The centre of each growth further presents a dense, broad band, looking not unlike an obliterated and thickened blood-vessel.

"Formerly, the term 'fungus hæmatodes seu spongiosa' was applied to these growths, but it has also been bestowed upon cancerous, sarcomatous, and other malignant tumors whenever they presented an unusually vascular appearance, thus leading to much deplorable confusion. Virchow was the first to designate those growths as *angiomas* which are formed by a hyperplasia and ectasia of the capillary loops of the blood-vessels in a circumscribed locality. When, as always happens in the liver, these vessels are so distended as to form large sinuses or mere vascular spaces, then we have presented a structure the physiological paradigm for which is found in the corpus cavernosum of the penis, and which is now designated as the *cavernous* form of *angioma*.

"Microscopically, the accompanying slides present

an appearance so closely corresponding with the admirable delineation given by Frerichs* that I doubt whether a more accurate drawing for these specimens could have been made. Under higher powers, it becomes evident that the vascular spaces are lined with a single layer of endothelial cells; while the meshes are seen to consist of a dense fibrillated connective tissue, with few cellular elements. Smooth muscular fibres and a certain amount of elastic tissue also aid in forming the bulk of the whitish septa. Enormously dilated blood-vessels, whose thickened walls together with connective tissue form the irregularly-shaped meshes, may, therefore, be said to constitute these tumors. The peripheral portions are by far the most interesting, for we are enabled not only to observe how the adjacent hepatic cells undergo fatty metamorphosis and gradually disappear under the encroachments of the tumor, but here, also, the actual steps in their development can be readily studied. The larger growths in this specimen are not surrounded by well-defined capsule, as sometimes happens, and as is the case in the numerous small cystic angiomas to be referred to presently; but there are seen, here and there, bands of connective tissue extending between the acini. These bands, both in position and appearance, resemble the cicatricial tissue observed in advanced cases of cirrhosis, with this difference, that the one is circumscribed, while the other is diffused.

"The offsets from these angiomas are extremely vascular; even in them the capillaries are beginning to widen. This teleangiectatic condition is also possessed in common by the cirrhotic tissue, as has been recently pointed out by Cornil† and Rindfleisch.‡ A localized interstitial hepatitis is, therefore, the preliminary process, while the granulating connective tissue formed thereby, being unusually rich in blood-vessels, presents the most favorable conditions for the subsequent development of the angiomatous growths. This predisposition to the formation of sclerotic tissue is, in this specimen, certainly a localized one, for sections made through the hepatic tissue at some distance from the tumors fail to reveal even the earliest stages of indurative interstitial hepatitis.

"From injections that I have formerly made upon other specimens of hepatic angiomas, I am fully convinced of the correctness of the disputed statement that they can be filled only from the branches of the hepatic artery and portal vein, and that the lumen of the branches of the hepatic vein becomes compressed and obliterated. The multiplicity of these growths is a very ordinary occurrence, but it is extremely rare for them to attain the size of a walnut,§ which is certainly exceeded by several of the tumors in this specimen.

"The interest in this liver, in addition to the tumors already mentioned, is heightened by the presence of numerous (I have counted over fifty) small cystic formations. These vary in size from that of a pin's head to a small pea. They are generally filled with fluid blood; have a distinct limiting capsule; are clothed with endothelium, and frequently present slight ridges upon their interior surfaces.

"These cysts are scattered over the entire surface of the organ, and but few of them are concealed beneath the surface. Their endothelial covering, alongside of their contents, indicates their origin from the blood-vessels, perhaps by simple dilatation, but more probably also by the atrophy of the septa, the remains of which are seen as ridges upon the inner walls. Such an interpretation has been given by R. Volkmann,|| in

a case of *angioma cavernosum hamatocysticum nymphae*, and I think can also be accepted here. The minuteness of some of these cysts led me to hope that it would be possible to ascertain in what part of the territory of the acini they first begin to develop. Unfortunately, this could not be definitely determined in the absence of any injection, which had been rendered impossible by previous mutilation.

"Clinically, it is, of course, impossible to diagnose these hepatic angiomas, and Frerichs states¶ that he knows of no case in which they have given rise to local or general disturbances. Angiomas sometimes, however, lead to the development of melanotic sarcoma, and then become highly malignant, a by no means rare occurrence when they are seated in the skin."

The PRESIDENT believed that the specimen was the first one of angioma of the liver ever presented to the Society,—at least with a definite description of the lesion. It is very rare, at least, to find multiple lesions of this kind. He was able to recall two cases, in both of which the tumor was at the border of the liver, and triangular in shape. One was at least two inches in diameter, the other smaller, but both projected beyond the surface of the organ. The resemblance to hemorrhagic infarctus was more superficial than real, as the surface on a fresh section reveals to even slight examination the characteristic reticulum.

Dr. BERTOLET said that eight days ago he had met with a single angiomatous tumor in the liver, also in a male subject of advanced years. Out of an equal number of post-mortem examinations, he thought they were more numerous in a late than in an early period of life. He recalled but one or two cases recorded where there were any decided projections from the surface of the organ; but, as a rule, the seat was somewhat depressed. Those which caused a protuberance were seated in the lobus Spigelii.

The PRESIDENT replied that the protrusion was not excessive; but in passing the hand over the convexity of the liver it was appreciable. He thought that the surface of the growth was one-third of an inch above the surface of the hepatic tissue. The reticulum was very loose, and the meshes exceedingly large.

Chylous fluid from a hydrocele.

Dr. H. LENOX HODGE presented the specimen, for Dr. C. H. MASTEN, of Mobile, Alabama, who furnished the following history:

"It may prove interesting to the members of the Pathological Society to examine the accompanying specimen.

"The history of the case is briefly as follows: W. H. W., a native of Mobile, aged 22 years, robust in health, five feet eleven inches high, one hundred and fifty-seven pounds in weight, bilious temperament, black hair and eyes, dark complexion, presented himself on the 18th of October, 1874, to be treated for 'hydrocele.'

"He stated that some eight years ago he had first noticed an enlargement of his scrotum, which, however, did not give him any inconvenience, and that it was not until about four years ago that he considered it necessary to seek medical advice upon the subject. Then he was 'tapped' by his medical adviser, and (to use his own language) 'a quantity of milk was drawn out.' Subsequently he was tapped on several occasions, but no treatment instituted for a permanent cure. To satisfy myself of the nature of his affection, I at once introduced a trocar, and, to my astonishment, I drew off f3viii of a white fluid, which, to all appearances, resembled 'milk.' As the case was a novel one, at least to me, I concluded to send a specimen of the fluid to my friend Dr. James Tyson, of Philadelphia, for his examination and opinion.

* Klinik d. Leberkrankheiten, Atlas., Taf. VI. Fig. 5.

† Archiv. de Physiologie, Mars et Mai, 1874, p. 272.

‡ Lehrbuch d. Path. Gewebelehre, 2 Aufl. S. 417, Fig. 145.

§ Virchow, Geschwülste, Bd. iii. S. 392.

|| Archiv f. Klin. Chirurgie, Bd. xv. p. 568.

¶ Leberkrankheiten, Bd. ii. S. 214.

"The following extract from his letter, of date Philadelphia, October 25, 1874, gives the result of his examination:

"The specimen is alkaline in reaction, sp. gr. 1015, highly albuminous, and appears to be made up, as determined by microscopic examination, of innumerable molecules, which are mere points under a power of four hundred diameters, together with a limited number of small granular cells, somewhat smaller, but otherwise resembling the colorless corpuscles of the blood, floating in a serous fluid.

"Its physical characters are precisely those of *chyle*. Chemically, I find it almost completely dissolved by ether, and, after evaporation of the latter, to leave a cream-like mass. There were no spermatozooids whatever.

"The fluid is not only in its physical but in its chemical characters comparable to chyle, and I believe its origin to be similar to that of chylous urine so called, which is probably due to the leakage of a lymph-vessel into the bladder."

"So here there is, probably from some cause, a similar leakage from a lymphatic into the hydrocele sac. . . . A similar case is reported by Vidal, and called 'galactocoele.'"

"Our fluid was not examined for sugar; but, even with sugar present, I should compare the fluid to lymph or chyle, rather than milk, for it contained—

"1st. The *molecular base*, with very few oil- (milk-) globules.

"2d. The leucocytes, or chyle-corpuscles.

"3d. The albumen.

"Signed,

JAS. TYSON."

"Without speculating upon the case, I will simply state that I did not see my patient after the date upon which I evacuated the sac until the 1st of the present month, when he presented himself again, and requested that some operation should be done for his permanent relief, as he was contemplating a matrimonial connection and wished to be fully prepared for the occasion.

"The outlines of the operation I will mention, for the condition of the parts (as revealed by the operation) proves the correctness of the suggestion made by Dr. Tyson.

"On the 5th of April I cut down upon the sac, and then evacuated its contents through a canula. I found the same character and quantity of fluid as on the former occasion. After having discharged its fluid contents, I split open the sac and carefully examined its entire internal surface, for the purpose of detecting, if possible, the cause of the peculiar fluid. At the upper portion of the sac, just where it begins to be reflected backwards over the testicle, I discovered a small glandular-looking body, about the size of an ordinary pea, having very much the same appearance as the pouting granulations we often see at the opening of a fistula. The sac was very much thickened, and as dense and firm as the ball of an ordinary Davidson's syringe; it was smooth and polished on the inner side, showing no appearance of vessels. Slicing off this little body with a pair of scissors, I at once saw the mouths of some three or four vessels, *which did not bleed*, and which I believe were the mouths of the lymphatics, which had poured out this fluid.

"I dissected them back for a short distance, to see if they had any connection with either the cord or the gland, but found they were lost in the cellular tissue which surrounds the tunica vaginalis. I carefully tied the bunch of vessels with a small silk ligature, and brought one end out. Then, having cut away the front wall of the thickened sac, I coapted its edges with some four or five delicate silk sutures, bringing to the outside a free end of the suture, and then closed the wound in the integuments with the pin-suture, ordered

cold-water dressings, and left my case to heal, as I hoped it would, by primary union.

"On the fourth day I removed the pin-sutures, and found the wound in the integuments thoroughly united; and on the 10th of the month, just eleven days after the operation, I discharged my patient, as I hope, permanently cured.

"I am aware that it is not usual to treat hydrocèle cases by excision of the sac, and then attempt to gain primary union; but in this climate the success of surgical operations is so very great, and the tendency to primary union so remarkable, that I felt justified in attempting the same in this case, as it was desirable to avoid all suppuration. There was very little inflammation following the operation, and, with the exception of some congestion and weight of the testicle (not more, however, than usually remains after an ordinary case of orchitis), I may pronounce my patient cured.

"I am pleased to report this case to the Society, not alone on account of its rarity and the interest which I believe it will afford, but because its results so fully sustain the views of Dr. Tyson as to its origin,—viz., 'a leakage of a lymphatic into the sac of the tunica vaginalis.'"

Dr. J. M. BARTON said he had been much interested in the preservation of this fluid in a specimen presented by him, and in the case of the specimen presented some time ago he had tried sulphite of sodium, carbolic acid, salicylic acid, and, finally, hydrate of chloral, with which he succeeded.

(To be continued.)

REVIEWS AND BOOK NOTICES.

CYCLOPEDIA OF THE PRACTICE OF MEDICINE. Edited by Dr. H. VON ZIEMSEN. Vol. II. ACUTE INFECTIOUS DISEASES. By Prof. THOMAS, of Leipsic, Dr. CURSCHMANN, of Berlin, Dr. ZUELZER, of Berlin, Prof. HERTZ, of Amsterdam, and Prof. VON ZIEMSEN, of Munich. ALBERT H. BUCK, M.D., New York, editor of American edition.

The second volume of this great work bears out in every way the promise of its predecessor. The different subjects have been assigned to writers each possessing peculiar fitness for the allotted task, and, we are glad to add, not too old to give it careful thought and assiduous research; the latter is especially evident in the authorities arrayed under each subject, some of the articles fairly bristling with bibliographical lore.

The subjects varicella, measles, and rubeola are treated by Prof. Thomas, the translation being by Edward Wigglesworth, Jr., M.D., of Boston. Prof. Thomas finds it necessary to combat the view of the identity of varicella and variola which is still held by some authorities, notably Hebra of Vienna. Measles receives considerable attention, the subject of anomalies and complications being treated at some length. We are inclined to believe that the mortality is estimated at a somewhat lower rate than recent accounts from Fiji would support. Rubeola, röheln, or German measles is a disease which has not hitherto, we believe, found place in any systematic treatise upon medicine published in this country;* nevertheless the affection does occur here not unfrequently, as Dr. I. Lewis Smith† has shown, and Dr. Thomas's lucid account of it will be read with interest.

The article on scarlatina is also from the pen of Prof. Thomas, the translation being by Edward Frankel,

* We must except Drs. Meigs and Pepper's work on Diseases of Children, which contains a full account of the affection.

† Archives of Dermatology, October, 1874.

M.D., and John C. Jay, Jr., M.D., of New York. It is quite a book of itself, covering some one hundred and fifty pages. Under the head of treatment, especial stress is laid upon warm and cold baths and inunction, baths being recommended even in commencing nephritis.

Dr. Curschmann contributes a somewhat more concise article on smallpox, translated by George H. Fox, M.D., of New York.

Dr. Zuelzer's contributions comprise erysipelas, miliary fever, translated by Jas. C. White, M.D., of Boston, and dengue, influenza, and hay-fever, translated by I. Haven Emerson, M.D., of New York. As regards the etiology of erysipelas, Zuelzer is strongly inclined to attribute to it a fungous or bacterial origin. His description of treatment, local and constitutional, presents the usual array of vaunted specifics. He himself prefers the expectant plan combined with a nourishing diet. In the more serious forms with high fever he advises the use of the mineral acids with quinine: cold baths are also recommended. Locally, Zuelzer suggests merely the use of powdered starch and cotton wadding, together with perfect rest. Occasionally the surface may be painted daily with collodion to which glycerin has been added in the proportion of one part to fifteen, in order to prevent cracking. It forms a good covering and exerts mild compression. Ice-bags are recommended in severe cases.

The articles on miliary fever, dengue, influenza, and hay-fever are necessarily somewhat brief. Under the head of treatment of hay-fever the forlorn announcement is made, "Treatment is still powerless against hay-fever."

Prof. Hertz treats at length of malarial diseases, going into the subject of their geographical distribution and etiology with considerable detail. This article will perhaps prove one of the most interesting in the volume to American practitioners, particularly in the South and West. Its translator is found appropriately in the Mississippi Valley, in the person of Edward W. Schauffler, M.D., of Kansas City.

Prof. Von Ziemssen himself concludes the volume with a contribution on epidemic cerebro-spinal meningitis, translated by A. Brayton Ball, M.D., of New York.

Looking at the volume in its entirety, we must testify to the agreeable and easy style in which the various contributions have been written, making the book exceedingly pleasant reading. Much credit is due in this respect to the ability of the translators, and especially to the pains-taking fidelity with which the editorial portion of the work has been accomplished.

Some complaint has been made of the cumbersome size of the volumes of this work; but, although the one before us would hardly be found suitable for the "Leisure Hour Series," the inconveniences of its bulk are compensated in our mind by the clear and open type, and the almost creamy richness of the paper upon which it has been printed.

A. V. H.

SELECTIONS.

VALENTI Y VIVO ON THE ANTAGONISM BETWEEN STRYCHNIA AND MONOBROMIDE OF CAMPHOR.—Dr. Valenti y Vivo has made a series of researches on the supposed antagonism between these two substances, and has arrived at the conclusion that monobromide of camphor may be considered as an antidote for strychnia. According to Dr. Valenti, the following conclusions are well established (*Siglo Medico*, April 18, 1875):

1. Twelve dogs, after taking a fatal dose of strychnia, were saved by the use of bromide of camphor. The

experiments were practised in a satisfactory manner, with crucial tests.

2. The tetanic convulsions produced by strychnia may be reduced in force and frequency by the use of bromide. The action of the antidote is rapid and sure.

3. The hyposthenic action of the bromide mitigates the reflex activity of the poison. The tonic convulsions are converted into clonic.

4. The physiological antagonism is comparatively limited. A strong dose of bromide of camphor is necessary to antagonize the effects of strychnia.

5. The bromide acts on the sympathetic nerve; this is demonstrated by the myosis and the cardiac paralysis which were observed after its administration.

6. After an overdose of bromide, the united effects of the poison and the antidote produce death by syncope; when death takes place during the strychnism and without the antidote, cardiac impulses are observed post mortem; when it takes place after and through the use of bromide, cardiac impulses are never observed.

7. The experiments show that it is preferable to introduce the bromide by gastric ingestion and in small and repeated doses. The subcutaneous method, employed in some experiments, has not given satisfactory results.

—*London Medical Record*.

GLEANINGS FROM OUR EXCHANGES.

CROUP AND DIPHThERIA (*The St. Louis Medical and Surgical Journal*, June, 1875).—Dr. Edward Montgomery enumerates the following characteristics which prevent him from accepting the doctrine of the identity of croup and diphtheria:

Croup is mostly confined to infancy and childhood, while diphtheria may and does attack all ages. Croup is neither infectious nor contagious, whilst diphtheria is eminently so.

Croup generally comes on suddenly in the night, the patient having been apparently well on going to bed, whilst diphtheria is preceded by many hours of general *malaise*, with a gradual exacerbation of symptoms.

The course of croup is short,—often two days, and rarely exceeding four,—whilst diphtheria extends from seven to twenty days.

In croup there is no swelling of the throat or of the cervical glands, whilst both these phenomena are present in diphtheria.

In croup there is no fetor from the throat, in diphtheria there is a strong and disagreeable odor. In croup the false membrane is mostly confined to the larynx and trachea; in diphtheria it rapidly invests the whole mucous membrane of the throat, involving the air-passages and the nostrils, and often appearing in the oesophagus, anus, and vagina.

In croup the false membrane is lighter in color, not so thick, and when detached does not leave a deep eschar and does not form on wounds or abraded surfaces; in diphtheria the membrane is dense, dark-colored, when detached leaves a deep eschar which readily bleeds, and is apt to form on wounds or abraded surfaces.

In croup there is no dysphagia, and no fetid discharge from the throat and nostrils; in diphtheria swallowing is accompanied with great difficulty and pain, and a fetid exudation from the throat and nose is almost invariably present.

In croup there is seldom much albumen in the urine, and when present it is in the advanced stage of the disease; in diphtheria albuminous urine is the rule, and often quite extensive in the commencement of the malady.

Croup has rarely any sequel to be dreaded, whilst diphtheria is often followed by paralysis, loss of voice, dimness of vision, deafness, dysphagia, etc.

In croup there are not the severe constitutional symptoms, great prostration, and other signs of septic poisoning which so generally obtain in grave diphtheria.

In fully-developed membranous croup the majority of the cases are not affected by any medicines hitherto employed, whilst in diphtheria medical treatment can accomplish much good.

LARYNGEAL DISEASE IN RELATION TO PULMONARY PHTHISIS (*Transactions of Ninth Annual Meeting of the Medical Association of the State of Missouri*).—Dr. W. C. Glasgow reports the following interesting case as illustrative of the connection between the diseases of the throat occurring as a complication in pulmonary phthisis, and other manifestations of struma:

W. M., aged 16 years, seven years ago had a large strumous ulcer on the leg; this continued open three years; one year after healing of ulcer, another formed under the clavicle, which did not heal for two years; one year after healing, another formed on the forehead; several months after this had healed, he experienced trouble with his throat,—pain and difficulty of swallowing. When first seen, he was suffering from great dyspnoea and dysphagia,—the effort of swallowing causing great pain,—and the fluids, for he could swallow no solid food, were regurgitated through the nostrils. There was complete aphonia. A laryngoscopic examination showed complete destruction of the epiglottis to its base, great thickening of all the parts of the larynx, and œdema so great that the opening into the glottis presented a rounded form, not the usual oval presented by the cords. An examination of the lungs gave dulness over the left infraclavicular space, prolonged expiration, both inspiration and expiration of bronchial character, and numerous moist crackling râles; the right side anteriorly gave harsh respiratory murmur. He presented all the symptoms of pulmonary phthisis,—continued hectic, night-sweats, impaired digestion, and general bodily prostration, with loss of strength and weight.

Under local and constitutional treatment, the difficulty of swallowing ceased, respiration became free and natural, and all the local and constitutional symptoms disappeared except the aphonia, which remained unchanged. The larynx remained greatly thickened and distorted, but there was no impediment to respiration or deglutition. The respiratory sounds over the left lung assumed a broncho-vesicular character, and all signs of active irritation ceased. The patient regained strength and weight, and appears in good bodily health, with the exception of aphonia and a pustular eruption, which made its appearance several months after the active disease in the larynx had subsided, and which still continues, the pustules discharging a strumous pus.

EXTERNAL USE OF TURPENTINE IN THE TREATMENT OF TONSILLITIS.—In the *Leavenworth Medical Herald*, Dr. S. H. Roberts strongly recommends the use of turpentine externally in tonsillitis. He folds the flannel to four thicknesses, wrings it out in hot water, and pours oil of turpentine over a spot the size of a silver dollar. The flannel is then applied over the sub-parotid region, and the fomentation continued as long as it can be borne. After removal, a dry flannel is applied, and the same region rubbed with turpentine every two hours. This application is continued daily till resolution occurs. The doctor believes, from the evidence of his long experience, that thus applied early in the disease the oil of turpentine has almost a specific effect in tonsillitis. That its action is not simply that of an irritant he has proved by employing mustard, croton oil, tincture of iodine, etc., in the same class of cases. They always

failed to diminish the inflammation of tonsils, while the turpentine succeeded.—*New Remedies*, April, 1875.

MISCELLANY.

SOCIETY OF THE ALUMNI OF THE AUXILIARY DEPARTMENT OF MEDICINE OF THE UNIVERSITY OF PENNSYLVANIA.—The graduates of the Auxiliary Department of Medicine of the University of Pennsylvania who have received the degree of Doctor of Philosophy have organized an alumni association, and elected the following officers: President, Dr. Roland G. Curtin; Vice-President, Dr. De Forrest Willard; Corresponding Secretary, Dr. Edwin L. Evans; Recording Secretary, Dr. Charles K. Mills; Treasurer, Dr. John Guitéras; Executive Committee, Drs. George C. Laws, J. William White, Adolph W. Miller, George Kerr, Edward T. Bruen, John R. Partenheimer, James B. Walker, John R. Haynes, Robert Simpson, and Andrew Macfarlane.

The first annual meeting of the Society was held at the University on the afternoon of June 24, 1875. Resolutions were adopted instituting a "George B. Wood Prize" of fifty dollars, to be awarded to that graduate of the Auxiliary Department of Medicine who should pass the best examination and present the best thesis embodying original investigation.

ICE IN THE HOUSE.—The use of ice in small quantities frequently repeated is very general in many diseases, but it is generally found to be a difficulty to keep it from melting, especially in small blocks. Dr. Schwarz recommends, to obtain this result, that the ice should be put in a vessel covered with a plate, which vessel should be placed on a feather-bed and covered with a feather-pillow or cushion, feathers being very bad conductors of heat. Dr. Schwarz states that by this plan he has been able to keep six pounds of ice for eight days when the thermometer marked summer heat.

LADIES FOR LADIES.—Madame Brès, who last week read a thesis before the Paris Faculty of Medicine and obtained a doctor's degree, is reported to have been appointed physician to the Sultan's harem at Constantinople.

THE number of Professor Huxley's students in Edinburgh University now amounts to upwards of three hundred and fifty.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 29, 1875, TO JULY 3, 1875, INCLUSIVE.

MIDDLETON, J. V. D., ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of two months. S. O. 118, Department of Dakota, June 24, 1875.

GIBSON, J. R., ASSISTANT-SURGEON.—Assigned to duty at Fort Fetterman, Wyoming Territory. S. O. 73, Department of the Platte, June 26, 1875.

HUBBARD, V. B., ASSISTANT-SURGEON.—Relieved from duty at Jackson Barracks, Louisiana, and assigned to duty, temporarily, as Medical Director of the Department. S. O. 120, Department of the Gulf, June 25, 1875.

BROOKE, JOHN, ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 130, A. G. O., June 30, 1875.

SATURDAY, JULY 17, 1875.

ORIGINAL COMMUNICATIONS.

PLACENTA PRÆVIA, WITH A CASE.

BY S. J. RADCLIFFE, M.D.,

Member of the American Medical Association, etc.

PLACENTA PRÆVIA is one of those accidents incident to puerperal women, that may rightly be dreaded by both practitioner and patient, since its very rarity prevents the ordinary practitioner from becoming familiar with it. The only obstetric horror that can compare with it is convulsions; and these, anæsthetics have, in some measure, robbed of their terror.

In regard to the relative frequency and mortality of mother and child in puerperal convulsions and placenta prævia, Hodge says in regard to the first that authors vary exceedingly. "Thus, while Velpeau reports their frequency as one in a thousand, Madame Lachapelle fixes it at one in two hundred. Dr. Churchill, in his elaborate tables, gives the average of French and English practice as one in six hundred and nineteen nearly." He says, "Merriman states that out of fifty-one births, thirty-four were still-born,—about sixty-six per cent."

The second occurs once in about five hundred cases. Dr. Hodge quotes Dr. Frank's Prize Essay and valuable tables, published in 1855 in the *Trans. Am. Med. Assoc.*, that deaths from unavoidable hemorrhage prior to the full period were twenty-four per cent., while the deaths among the children were one hundred and sixty-six in two hundred and sixty-two; being a mortality of sixty-three and one-half per cent. Barnes says, "I had occasion to review my experience of the terminations of sixty-nine cases of placenta prævia. The deaths were 6,—i.e., one in $11\frac{1}{2}$, a proportion much smaller than that usually given in statistical tables."

With this view of the matter, then, this class of cases cannot be put off to a more convenient season. What must be done must be done quickly; promptness in action and in relief must be the uppermost thought, and, with this, a comprehensive view of the entire situation before you.

The main object to be kept constantly in mind is to staunch the hemorrhage, as the case may be, and thus to save life,—to save the life of the mother at least first, and secondly of the child, if viable, if possible.

Whatever treatment may be decided upon ought to be the right one for the emergency, for when once done it is done forever; it cannot be undone. But in the greatest emergency, and when hope of saving life may have almost fled, an attempt ought still to be made to do something towards it. I remember seeing a case at term with an intelligent physician of this city, several years since, where forced delivery was practised by turning under the use of ether, after means had been used to dilate the os and to bring on labor, without success. Though the case seemed to be a desperate

one, the means seemed to be happily well adapted to the condition of things, and though there was considerable shock and great loss of blood, the woman rallied for the time, but died of pyæmia, or septicæmia, probably, on the twenty-first day after delivery. The child I resuscitated after considerable effort, and it is now living, a hearty, healthy child of about five years.

It appears to be the prevalent opinion at the present day that when there is imminent and immediate danger of loss of life, excessive hemorrhage, shock, and exhaustion of the vital powers, delivery should be attempted at once, without any regard to the general condition of the patient; and this, too, even at the expense of the child, unless it is clearly proven that it may be saved; though some, as Simpson, consider it ought hardly to influence the treatment.

If, then, we have a case of placenta prævia clearly made out by examination, no matter at what period of gestation it may be presented to us after the fifth month, with profuse hemorrhage, perhaps coming in gushes, or in a continuous stream, with much shock of the nervous system and failing of the vital powers, our duty is clearly to attempt to deliver without any delay, and banish the thought to protract gestation with a view of having a more favorable result; and in this event one of two procedures will occupy the attention: either to try to force the hand through the undilated cervix, seize the feet, turn, and forcibly deliver,—*accouchement forcé* of the older writers,—and then remove the secundines as rapidly as possible; or to introduce one or two fingers through the os and into the uterus as far as possible, sweep them rapidly around the cervical zone of Barnes, separating the placenta, as far as the fingers reach, from the uterus, as first recommended by Simpson, then rupture the membranes, if in no other way, directly through the placenta, bring on labor by ergot, the binder, or the tampon, and leave the case, under surveillance, to nature.

Those who believe, with Churchill, that "the flooding is the necessary consequence of the dilatation of the os uteri, by which the connection between the placenta and the uterus is separated, and the more labor advances the greater the disruption and the more excessive the hemorrhage," will adhere, perhaps, to the former plan; while those who admit that the detachment of the placenta arises from an excessive rate of growth of placenta over that of the cervix will more readily rely upon the latter.

The former operative procedure is considered a very harsh and cruel one, greatly endangering the life of the mother, not only immediately by forcible dilatation, by rupture or laceration of the soft parts and consequent hemorrhage, but more remotely by septic or pyæmic poisoning, and not necessarily adding to the chances of the safety of the child; while the separation of the placenta within a given circle is considered more practicable, more easily accomplished, and gives better results for the mother and some chance for the child, as the hemorrhage is almost certainly arrested. Barnes says, "There

are two conditions present in flooding from placenta prævia. The *first, an immature uterus*. Flooding frequently occurs before the term of gestation is complete. The uterus is therefore taken by surprise before its tissue is developed, before it has acquired its normal contractile power. Besides this, the uterine neck is ill adapted to expand. The *second is the loss of blood* itself, impairing the vital power, causing shock and prostration. The several or the joint production of these conditions is a powerless labor, the absence of contraction. Hence the continuance of hemorrhage. We feel we cannot depend upon contractile force when all force is ebbing away with the blood; we are compelled to act, to assist nature in her extremity."

Considering the force of these two propositions as factors in the case,—viz., first, immature uterus, and, secondly, loss of blood, as present in placenta prævia,—we cannot be slow in appreciating also the force of the possible effects of treatment.

But, without attempting a discussion of the subject of placenta prævia in all its entirety, the following case will somewhat illustrate the mode of treatment in the management of placenta prævia more elaborately elucidated by Barnes in his work on "Placenta Prævia," and in his "Obstetric Operations."

CASE.

I was called, November 17, 1874, to visit Mrs. T. F., a plump, healthy woman, of Irish descent, about 32 years of age, mother of five children, and who had had remarkably easy times in all her labors. She stated that she had suffered from uterine hemorrhage for several days,—part of the time it had been very profuse,—and that, as she supposed herself pregnant about two months, she thought it possible she had miscarried. As I had no positive means of ascertaining whether or not she had aborted, and supposed it possible, I prescribed for her, enjoining rest and quiet, and after a few days the hemorrhage ceased. I saw her again in February last, while attending one of her children. She informed me she had discovered she had not miscarried, but she had had some flow each month at about the menstrual period, which she thought strange. Without making an examination, I still supposed it might yet be attempts at miscarriage, and insisted strongly upon the recumbent position and quiet at those times. I was called to visit her again, March 13, in haste, and found she had had a sudden, profuse hemorrhage, losing, possibly, between thirty and forty ounces of blood. She was taken on the sidewalk before her door, and, before she could be got up to her chamber, saturated her clothes and marked the floor on her way up the steps. I found about twenty ounces in the chamber-vessel, which she passed in it after getting up-stairs. I was surprised to find her in such good spirits and in such good condition after such a drain upon her. It really made very little impression upon her pulse, and she was not at all depressed by it. I made a digital examination then for the first time, and discovered the whole source of the trouble. The placenta was planted directly over the cervix, and nothing but

placental tissue could be felt, the os being open as much as is commonly observed in multiparæ at six months. I immediately notified her friends of her condition, explained to them the cause of her flooding and the danger she was constantly in from the same cause; that she must be watched, and I sent for on the first recurrence of the hemorrhage. The flow ceased on the 14th. I saw her twice on the 14th, and once each day till the 17th. She moved about her room and the adjoining one again, and, though a little pale, was quite strong and active.

I was awakened half an hour after midnight of the 18th, and was informed she had had a sudden and profuse hemorrhage while in bed, and was still flooding. I hastened to her, and found her in a state of great consternation and alarm, with a nervous chill, and having a great desire to have done for her what I had told her I might have to do,—that is, deliver her by artificial means. I saw her three times on the 19th, and on the 20th the flooding ceased. Up to this time the treatment had been only palliative or expectant, as I thought I had not arrived at the period when life was really in jeopardy, and feeling I had more active means as a *dernier ressort*, and feeling also that either horn of the dilemma was perilous,—the flooding or the induced labor and delivery,—I deferred further operation, hoping still gestation might go on to a time when delivery would be more easily and safely accomplished. But this, it will be seen, was futile.

On the night of the 21st the flooding came on again violently. She bled profusely all night, blanching her, reducing her to the lowest ebb compatible with life, placing her in imminent peril. On the morning of the 22d, finding all hopes dissipated of prolonging gestation to a period nearer her term, I concluded immediate delivery was the only means offered, if any, to save the patient's life. On examination I found the os and cervix rigid and unyielding, and could scarcely more than introduce one finger or two with force, and I could feel the warm blood trickling fast by. She was pale, had even a greenish, chlorotic hue of countenance, pinched features, sunken eyes, a shiver once in a while coming over her; surface cool, feet cold, pulse very faint and slow, scarcely perceptible at the wrist, and she was on the very border of death.

Desiring consultation, I suggested Dr. I. H. Thompson as most accessible, who was sent for to meet me. In the mean time I placed her in position across the bed with the parts towards the light, and attempted to introduce Barnes's dilator. Dr. Thompson arriving to my aid, he suggested immediate forced delivery by turning. I introduced my hand into the vagina, and attempted to force my fingers through the cervix, Dr. Thompson holding well down the uterine globe, but I found it tiresome, and utterly impossible in the then condition of the parts. I could only get in two fingers, and while I had them in, forcing them as far as I could reach I swept them around between the placenta and the uterine walls, completely detaching the former within that circuit. While I was manipulating, Dr. T. whispered to me that the pulse had gone at the wrist. As no time could be lost, requesting Dr. Thompson

to relieve me and change positions, he found it also impossible, without risk of injury, to introduce the hand for the purpose of delivery, but finding the bleeding had entirely ceased, I requested him to rupture the membranes *through the placenta* with a quill, which I had prepared for him, which was readily and promptly performed. Only the amniotic fluid now flowing, we agreed to plug the vagina with raw cotton, which was soon done, completely packing it in as tightly as could be, and that there might be no possibility of its escape we applied the T-bandage, and over the uterus also a narrow binder. With a few doses of brandy, the patient now rallied somewhat; the pulse, though feeble, could be felt at the wrist. We directed the brandy to be continued at short intervals, and a teaspoonful of Squibb's fluid extract of ergot to be given every half-hour; and we left her, to meet again at 2 P.M.

2 P.M.—There had been no bleeding since our last visit; she was comparatively comfortable, and had taken a cup of tea and a little toast. Her breathing was rather sighing and irregular, pulse feeble, 110, surface cool; said nothing, made no complaints, except that she had some pain in left side; plug saturated with dirty watery fluid; continued brandy and ergot, with little beef-tea in intervals. We saw her again at 7½ P.M.; she was more comfortable than when last seen, talked better and stronger, pulse more volume, some reaction and more warmth of surface, no hemorrhage; some uterine pain at long intervals, indicating contraction; very anxious about herself; said she felt true labor-pains, and begged me not to leave her. Dr. Thompson thought we could safely leave her till morning, as there was no urgency, no severe pain, or uterine contraction, and no hemorrhage; and there would be danger of recurrence of bleeding if the plug was removed, and she would be stronger and better able to undergo any further operation if deferred until morning. As she desired I should stay with her, I remained. At 8½ P.M. the pains became more frequent and expulsive, with some effort at displacement of the plug; they continued to grow stronger, quicker, and more effective; and at 9 P.M., finding the plug starting outwards, I sat by her and with forceps removed the plug of cotton, piece by piece, until all was removed; and then introducing my hand into the vagina, I found the placenta emerging into the passage; I seized and removed it; and as the os was now well dilated, I seized one foot and then the other, and, simply aiding the expulsive efforts of the uterus, delivered a six-months' foetus at about 9.10 P.M., without accident of any kind,—with scarcely a drop of blood.

The foetus had been dead evidently some hours, though she said she thought she felt it in the morning, just previous to the attempt to introduce the hand. The placenta was dark, congested, and not firm in feeling. The uterus contracted well. The patient felt now much relieved in mind, and rallied astonishingly at once. Her mattress was moved to the ordinary position, and she was made comfortable by removing her wet clothes. She had taken in about twelve hours an ounce and a half of fluid ex-

tract of ergot, without injurious effect. It sickened her towards the last, causing it to be rejected.

Her case went on now hopefully for several days, though the vital powers were greatly reduced, and the functions of the heart and lungs and the general circulation were exceedingly enfeebled. The pulse had not varied much from the range of 100 to 108, nor the temperature much from 100°. The vaginal discharges were watery, of a dirty muddy color, without much odor.

On the 27th, I noticed the discharges were quite offensive and more profuse, and had changed to a thin, yellowish, purulent character. A hectic flush lighted up her cheeks; there was more or less restlessness, and some hebetude, varied by drowsiness; and I began to feel the case might be lost at last by septicæmia.

I ordered ten grains of sulphite of sodium in elixir of calisaya every four hours; a vaginal wash of salicylic acid, twenty grains to the pint of hot water, used three times daily; and five grains of quinia each morning daily, with continuation of the brandy and beef-tea.

I had no further trouble after this. The condition of the patient gradually improved in every respect until the 3d of April, when the pulse was down to 90, with more volume and regularity; the temperature was normal, and symptoms of septic poisoning had entirely disappeared. All medicine was now discontinued except twenty drops of muriated tincture of iron three times a day, and beef-tea and brandy at longer intervals than before.

I continued in attendance until the 10th of April, when she was able to sit up in bed, had been on the floor the day before, relished her food, had improved in color and general appearance, and was altogether cheerful and happy over the result; four grains of quinia once daily, with twenty drops of muriated tincture of iron three times daily, were directed to be continued for awhile longer as a general tonic, with special directions to have a watchful care over herself, and particularly to see that she did not move about too soon.

On the 30th of April, I was surprised to have a call from her. She had walked several squares to see me, to show me how well she was. The consequence was she was "unwell" the next day, which lasted four days.

She called again on the 31st of May, and stated since that time she had no further disturbance; she looked well, had regained much of her flesh, and had a good rosy color.

NO. 1211 F St., N.W., WASHINGTON.

QUININE IN PERTUSSIS.

BY EDWARD T. BRUEN, M.D.

I WOULD like to offer to the readers of the *Times* a few practical observations upon the use of quinine in whooping-cough, which, although trite to some, may perhaps cause the successful use of the remedy by many others.

I had prepared a detailed account of seven cases I have treated with this drug in dispensary and

private practice, but, as they seemed repetitions of each other, I shall simply state the facts drawn from my clinical study.

In many cases, if the drug is used continuously, it either signally fails to relieve or else it affords but slight benefit. The proper method is to administer it by rapidly-increased doses for a period not longer than five days, after which it should be stopped, and after an interval, if necessary, recommenced.

If at any time during the twenty-four hours the paroxysms are especially violent, it is a good plan to administer the quinine at such intervals that a full dose shall be given one hour or two before the spell is expected. I have known of cases which have been most benefited when the quinine has been given in large amount in two doses. This, I have been told, has been the best means when the spells were very violent during the night. I have never used the drug in this way myself. The amount of quinine given in pertussis seems often limited by the fears of the medical attendant. I have found that to accomplish good the medicine must be pushed to a quantity equal to a full anti-periodic adult dose. To a child under three years old at least ten grains should be given in twenty-four hours; to one of twelve years, from sixteen to twenty grains in the same time. It is only by using these full doses that good can be accomplished or cures made. A word concerning what should be expected of the drug.

In many instances I have seen it cut down immediately the number of the paroxysms from forty or fifty daily, as registered by pin-holes in a card, to only eight or ten; the case afterwards rapidly recovering similarly to those which have run their full course. In more rare cases it is positively curative, but the great relief afforded is amply sufficient to make us employ it when other means are so constantly ineffectual.

In my hands it did not usually moderate the violence of the paroxysms: this effect is generally seen to occur gradually after the spells have been reduced. I have seen only a few cases where unfavorable symptoms appeared during the treatment by quinine; one child of fourteen months, who had taken ten grains of quinine for two days, manifested symptoms of congestion of the brain, which yielded promptly to treatment, the disease being also cured. In one or two other cases a little drowsiness and headache were the only unfavorable symptoms, but these effects came on gradually, and I believe there is no danger in using quinine freely as I have recommended, provided we watch our patients with ordinary care.

WATER IN FEVERS.—Dr. Tauszky says (*New York Medical Journal*, July, 1875) that it can be put down as a law that the reheating of the body takes place the quicker, the colder is the heat-depriving medium applied, the more force, such as friction, movement of the body, or of the water, is used. If we desire to retard the reheating of the body, the applications must be made at longer or shorter intervals, and last for a longer or shorter period of time, proportionate to the degree of fever.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF PROF. H. C. WOOD, M.D.

Reported by CHARLES K. MILLS, M.D., Chief of Clinic.

SCIATICA AND NEURALGIA TREATED BY THE CONSTANT CURRENT.

SCIATICA.

P. M., æt. 56, married, came to the clinic February 17, 1875. His life had been chiefly one of hard work and exposure. Eight years before, he first had an attack of sciatic neuralgia, which lasted about a year. Now and then since, especially in cold weather, he had had pain, sometimes violent, along the line of the sciatic. For five months he had seldom been free from pain.

When first seen, he walked with his body much bent, using a cane. A slight jar would cause a violent paroxysm of pain. The right leg grew tired with slight exertion. Pressure over the sciatic at almost any point would cause pain, but three points of peculiar tenderness—points *dououreux*—could be readily made out: the first about the sacro-iliac junction; the second, between the great trochanter and tuber ischii; and the third, about the head of the fibula.

It was determined to try the efficacy of a pure galvanic treatment. The current used was derived from Siemens-Halske cells. Twenty sittings were given, covering six weeks, and each lasting from ten to fifteen minutes. The current was not interrupted, and was of just sufficient strength to allow the patient to say that he felt it distinctly, eight applications being made with five cells, seven with ten, and five with fifteen. The two poles were generally placed over the sciatic, at points varying from a few inches to two feet apart, but sometimes the positive electrode was applied over the lower dorsal region of the spine, and the negative along the line of the nerve.

The patient improved from the first, notwithstanding unpropitious weather. His treatment was commenced February 22, with five cells. He reported and was treated with five cells February 23, 24, 25, 26, and 27, constantly improving in sleep, strength, gait, general facility of movement, and amount of pain. He experienced relief after each sitting. From February 27 to March 4, owing to the weather, he did not report, his condition remaining about the same. March 4 and 5, five cells were used with benefit. He did not return again until the 10th. He got chilled on the 5th, and suffered great pain on the 6th, 7th, 8th, and 9th; but was not as bad on any of these days as he had been before coming under treatment. From March 10 to April 7, when he ceased to attend, he was treated twelve times, with either ten or fifteen cells. His leg continued steadily to improve, notwithstanding the severe and changeable weather, the long distance—about six miles—which he had to come, and the fact that several days sometimes elapsed between the applications. He complained of some pain in the side and back occasionally, but the sciatica appeared to be cured. He could bear his whole weight on the right leg, and could walk erect without a cane. The limb felt stronger than it had done for years. It could be handled with impunity, without causing pain. The points *dououreux* had vanished; not a drop of medicine was given, and no liniments or other external applications were used.

If this patient could have been admitted to the hospital, and the sittings have been more frequently repeated, with rest in bed as an adjunct to the galvanic

treatment, he could probably have been discharged, well, in from two to three weeks.

An important point in the history of this case, as bearing upon the question of the efficacy of galvanism to alleviate pain, is the fact that after every application the patient experienced marked, and, in some instances, signal relief.

This case was under observation during the latter part of February, the whole of March, and the first week of April, embracing a period when the weather was variable and severe; and some notes were taken upon the influence of the state of the atmosphere upon pain. The patient could foretell a storm by the painful sensations in his leg. The pain was always most violent when a storm, either of rain, hail, or snow, was coming on. After the storm was fully established, it would sometimes abate remarkably. From personal observation of the weather, and from consultation of the records of the Signal Service, the pain seemed to be greatest on days when the barometer ranged about 30; when the thermometer stood between 25° and 30°; before and during storms; when the wind was changing to the east, and when east winds prevailed; and when the air was heavily charged with moisture. The observations and comparisons, however, were not sufficiently extensive and systematic to allow any positive general conclusions to be drawn.

NEURALGIA.

E. E., æt. 45, married, had enjoyed good health until four years before coming for treatment, when she began to suffer from neuralgia of the left side of the face and head. She had had attacks every week or two since, which recently had been getting worse. The pain was severe, and most marked over the left brow. During the paroxysms of pain she could scarcely see, and her eyes were intolerant of light. A tender spot, corresponding to one of Valleix's points douloureux, was found just above the centre of the left eyebrow. Her appetite was poor, but her general health was otherwise pretty good.

On the day of coming under observation, the use of a galvanic current of five cells was commenced, placing the positive pole in front of or below the ear, and the negative over the supra-orbital nerve. She came twice a week to the clinic, and received thirteen applications, when she was discharged, cured.

She only had one attack while under treatment. By request, she reported one month after her discharge, up to which time she had had no recurrence of the neuralgia. No medicine was employed.

SERVICE OF D. HAYES AGNEW, M.D.

Reported by Wm. M. MASTIN, M.D., Resident.

RUPTURE OF THE ABDOMINAL WALLS, WITH BARTON'S FRACTURE OF THE RADIUS, AND OTHER INJURIES, FROM A FALL—DEATH—AUTOPSY.

J. K. S., 76 years of age, painter by occupation, a native and resident of Philadelphia, was received into the hospital June 15, 1875, in the following condition: About an hour before admission, while working at his trade, he fell to the ground from the second-story window of a dwelling-house, a distance of thirty feet. The whole force of the fall was received on the left hip and side and palm of the right hand. The man was very much shocked, and examination showed extensive contusion of the soft parts of left buttock and lumbar region, with comminuted fracture of crest of ilium, fracture of two lower ribs, and fracture of inferior third of right radius. A tumor, the size of a foetal head, occupied the left lower part of the abdomen on line with crest of ilium. This was elastic and compressible, with thin walls, dull on percussion, and communicated to

the finger the impression of its containing fluid. The position of the left leg, with a slight degree of shortening, suggested fracture of the neck of femur, but the injury to buttock and pelvis was so extensive as to mask all other symptoms, thus preventing a positive diagnosis. The fracture of the radius was diagnosed as Colles' fracture, with some comminution. Considerable difficulty was experienced in effecting reduction.

The morning following, the man was found to be some little better; reaction not established, but hopes were entertained of his recovery. There were no symptoms of internal injury, and the abdominal tumor was resonant and gurgling. The man complained of pain only in the arm, feeling no inconvenience from injury to side. He took food readily. Later in the day he showed evidences of sinking, and died that evening from shock and exhaustion.

Autopsy.—Body examined seventeen hours after death: abdomen distended and tympanitic. The tumor was first inspected, and found to be due to a protrusion of the intestine through a rent in the walls of abdomen. The tear in peritoneum was three and a half inches in length and parallel with the axis of body; that in transversalis and internal oblique muscles was across the direction of their fibres, whilst that of external oblique was in the line of and a mere separation of its fibres, so that the abdominal walls were ruptured in two directions: first, a perpendicular rent of peritoneum, transversalis, and internal oblique muscles, and second, an oblique of external oblique muscle. The integument remained intact, but was with the fascia dissected up from the muscles to two and a half inches on either side of the rupture, thus forming a large sac which was filled with fully three feet of the small intestine. A small knuckle of the protruded portion of the gut had insinuated itself into a pocket between the two oblique muscles, and was completely strangulated, being in a state of gangrene. One of the branches of mesenteric artery had given way, as shown by an effused clot in abdominal cavity. No evidence of peritonitis existed, except a slight localized injection of the visceral peritoneum. The fracture of the innominate bone was seen to involve the anterior superior spinous process, and a large portion of the superior part of the crest. The ribs were broken at their angles. There was no fracture of femur, but a partial luxation upwards of that bone; the capsular ligament being torn, the head of the bone rested on the upper margin of acetabulum. By far the most interesting feature of the post-mortem was the fracture of the radius. This was a true Barton's fracture,—a fracture extending into the joint. The bone was broken transversely an inch above the articulating surface, with an oblique fracture extending some two and a half inches up the shaft, splitting off a large piece of the shaft, which was driven down behind the lower fragment, its end resting against the ulna. A longitudinal fracture passed through the middle of the lower fragment into the joint, dividing the articulating surface into two portions. Opposite the transverse fracture several spiculæ were lying loose in the connective tissue. There was no impaction, the difficulty in reduction arising from the displacement downwards of the split-off portion of the shaft.

VERATRUM VIRIDE IN EPILEPSY (*The Cincinnati Lancet and Observer*, July, 1875).—Dr. E. E. Riopel reports the case of a boy, æt. 6, who had severe epileptic convulsions, recurring frequently. Veratrum viride was given, commencing with one drop, and increasing every half-hour, until ten drops were taken. It was then given every hour, and continued for two days. The result was an entire cessation of the convulsions, and apparent recovery.

TRANSLATIONS.

GRAVE SCROFULIDES OF THE BUCCO-PHARYNGEAL MUCOUS MEMBRANE.—According to Dr. G. Homolle (*Thèse de Paris*, 1875, *Bull. Gén. de Thérap.*, No. 10), lupus of the face is accompanied in one case out of five with lesions of the bucco-pharyngeal mucous membrane, and these parts should always be examined when facial lupus exists. These lesions may be derived from continuity in the region of the commissures of the lips or the nasal fossæ, or more frequently may occur in the mouth or throat without direct propagation. They may take the erythematous, ulcerative, tubercular, hypertrophic, or canceroid form, the seat of the lesion having a marked influence upon the type which the disease assumes. Analogous affections may be primarily developed upon the mucous membrane of the palate, the isthmus, or the pharynx. They show themselves under two principal forms: lupus of the throat (progressive erosion) and ulcerating scrofulide (perforating ulcer). The latter coincides in certain young subjects with certain lesions which have been attributed to hereditary syphilis,—notched teeth, interstitial keratitis, etc. These primitive scrofulides of the throat are usually affections of childhood. Their favorite seat is the velum palati, and after that the posterior wall of the pharynx; they scarcely ever appear on the tonsils. The disease is rarely propagated to the epiglottis, and still more rarely to the larynx.

The grave scrofulous anginas are observed in manifestly strumous subjects. Tardy hereditary syphilis is perhaps one of the causes of their appearance. The diagnosis is always difficult. Syphilis must be constantly borne in mind, and a very careful examination of both patient and history should be made before pronouncing an opinion. Lupus of the throat, with progressive erosion and posterior adhesions of the hinder half-arches to the vault of the pharynx, is more easily distinguished than ulcerous scrofulides from other forms of chronic angina. The treatment is anti-strumous, with local cauterizations. X.

THE ELASTIC LIGATURE IN SPINA-BIFIDA.—At a recent meeting of the Société de Chirurgie, reported in the *Bull. Gén. de Thérap.*, No. 10, 1875, the reading of a case of spina-bifida occurring in a child three years old, operated on by elastic ligature and cured, became the subject of some discussion. Another case was cited in which the operation was followed by convulsions and the ligature had to be withdrawn.

M. Blot, who spoke on the subject, said that he had not entire confidence in the procedure. Nervous filaments, he remarked, were often present in these tumors, and even expansion of the cord; it is not therefore always prudent to interfere. Besides, he had found that these tumors decrease in time, and often disappear entirely at last. In the course of the discussion on the indications for operation, M. Despres said that when the tumor is not reducible, an operation may be performed without inconvenience. When, however, there is a large communication between the tumor and the spinal envelopes, it is necessary to abstain from all intervention. X.

ELEPHANTIASIS SCLERODERMA.—M. Vidal read notes of the following case before the Société des Hôpitaux, at a recent meeting:

The patient was a man thirty-seven years of age, of fine constitution, and who had always enjoyed good health. Two years previously he had suffered from sudden suppression of profuse perspiration, and subsequently from chilliness of the extremities; then the skin in the region of the eyebrows became red and indurated for some hours, but returned to the normal con-

dition. Afterwards erythematous elevations followed, which gradually invaded the arms, the fore-arms, the thighs, the scrotum; then violet spots, "varicosities" of the skin, a kind of local asphyxia, some superficial eschars, a marked condition of pityriasis. The skin is at present reddened, and in the neighborhood of the neck and on the back of the head a considerable thickening of the derm is perceptible, forming more or less isolated tumors.—*Bull. Gén. de Thérap.*, No. 10, 1875. X.

DOUBLE LIGATURE OF THE FEMORAL ARTERY.—A young man received an oblique wound of the superior third of the anterior external face of the right leg. By mistake only a simple dressing was applied, and five days later a pulsating tumor was observed extending to the lower third of the leg. Continued pressure failing to give relief after some days, Professor Landi ligated the femoral below the canal of the adductors. The operation was difficult, on account of the thick layer of fat. The aneurismal tumor ceased to beat immediately after the ligature. The ligature was removed in six days; but on the eighth day hemorrhage from the upper portion of the ligated artery took place, possibly on account of purulent infiltration in the sheath of the artery. The femoral was again ligated in Scarpa's triangle, and complete recovery, with perfect use of the limb, was the result.—*Bull. Gén. de Thérap.*, No. 10, 1875; from *Raccoglitori Medico*, January, 1875. X.

SUPPRESSION OF URINE FOR EIGHT DAYS WITHOUT URÆMIC SYMPTOMS.—Pourmadre (*Deutsche Zeitschr. f. Prakt. Med.*, May 29; from *Giornale Venet. di Sci. Med.*) gives the following case. A man, fifty years of age, complained that without any assignable reason he had been unable to urinate for the past twenty-four hours. On examination he was found to be suffering from serous diarrhœa with rheumatism, and he stated that for some time previously his urine had been reddish, cloudy, and thick with sediment. Rest, baths, and linseed poultices failed to relieve the anuria or the diarrhœa, although there was neither pain in the kidneys, quickening of pulse, nor increase of temperature. A catheter introduced into the bladder brought away only a few drops of urine. In the course of the next five days the abdomen became distended, and there was some inclination to vomit. On the sixth day there was meteorism, a small pulse, flushed face, some delirium and sopor, some appearance of blood with the diarrhœa. On the seventh day the meteorism and diarrhœa increased. An enema containing ether was ordered, together with a bath of two hours' duration. Soon after, a clot of blood with a few small calculi came from the urethra, a considerable amount of blood followed, and the suppression of urine was over. It is probable that the presence of the calculi in the urinary passages may have brought on cramp and anuria, while the urinary secretion was removed by the concomitant diarrhœa. X.

MERCURY IN THE MILK OF WOMEN DURING THE "INUNCTION CURE."—Kahler (*Deutsches Zeitschr. f. Prakt. Med.*; from *Rundschau*, 1875, s. 260) made examinations of the milk of three nursing women by electrolytic chemical analysis, any mercury contained in the milk being deposited upon a little gold electrode. The amalgam thus obtained was heated in a glass tube, thus volatilizing any mercury present. The latter was then converted into the iodide, giving a very striking reaction. Inunction of mercury in nursing women, practised so thoroughly as to cure any syphilitic manifestation which was present, yet failed to give a mercurial reaction to the milk. That some influence was at work was shown in certain cases in which syphilitic manifestations in the infant were cured even while no mercury could be found in the mother's milk. X.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JULY 17, 1875.

EDITORIAL.

SOME WISE MEN OF GOTHAM.

QUACKERY in electricity is as much quackery as is quackery in patent medicines, and it seems to us that physicians should be just as careful in allowing their names to be associated with the one form of rascality as with the other. Paoli's electro-voltaic belt is probably as useless a piece of household furniture as any head of a family could invest his money in: patented in Washington, made in New York, it is self-puffed throughout the universe, literature, both secular and religious, from *Belgravia* to *John Wesley's Journal*, being laid under contribution to it. To show the real scope of this discovery, we give the following extract from a pamphlet very freely circulated by the company:

"With this end in view, all drugs should be discarded, and a more rational view of nature's laws observed. Drug medicines too often injure the system, arrest the digestion, and cause a simple acute disease to resolve itself in a complicated chronic one, often incurable by any method. In fact, drugs do much more injury than good. Still it must be acknowledged that, in some cases, drugs do effect a change in the secretory and circulatory processes, and thus assist nature in recovery; but it is only the one who has a strong vitality that derives benefit—the debilitated are always injured.

"We say without fear of contradiction, that every disease depending upon a debilitated condition of the vital forces, can be promptly and permanently cured by electricity, if properly applied. Life is supported wholly by electrical currents, and diseases are cured by the supporter of life; they are cured by electricity when every other means have failed.

"Paoli's wonderful discovery has now been endorsed and recommended by literary and scientific men of the highest rank; by the most eminent medical professors in Europe and America, who testify that Paoli's invention is the most effectual remedial agent ever discovered, and that nothing in the annals of science or medicine has ever approached it in its remarkable powers over the human system, and in the cure of disease."

Judge of our surprise, reader, when on continuing the perusal of this pamphlet we came upon a series of recommendatory testimonials of "some of the most eminent physicians and professors of the city of New York, the originals of which can be seen at our office." The letters are really from men of position, interlarded with those from physicians, to speak mildly, not so reputable, and with those giving accounts of marvellous cures worked by these miraculous belts.

We refrain from mentioning any names, because we do not suppose these gentlemen gave these letters with a knowledge of the use to be made of them. We well remember the aid Swaim's Panacea received in a similar way in this city. The moral we desire to point is—Give no testimonials.

MEASLES AT THE ANTIPODES.

AN extraordinarily severe epidemic of this usually mild exanthem has during the last two years swept off a very appreciable percentage of the population of various places in the Southern hemisphere. During six months of 1873-74 it caused in the Mauritius Islands more than two thousand deaths, men, women, and children being embraced in the death-roll. In the summer of 1874 the disease was introduced into South Australia, whence it spread rapidly, appearing later in the year in Victoria and New South Wales, and the present spring reaching the Fiji Islands. In the latter locality the results are said to parallel those of the plague in Mediæval Europe; all ages stricken down, and the whole population pervaded with a frightful panic, so that no one ministers to the sick, and even the dead are left unburied. It is very probable that the accounts are exaggerated; but the general fact of the enormous mortality seems well established. In a people new to civilization, epidemics of civilization when they appear affect every one, because every one is equally susceptible, none being protected by previous attacks. The great mortality is no doubt in part due to neglect of all sanitary laws, to habitual filth, to no care or improper care of the sick, and various similar causes. In Melbourne sanitary neglect

was plainly very efficient in producing the great mortality. The epidemic occurred during the hot season, when the scanty water-supply was especially contaminated. To show the general recklessness, it is stated that one contractor was in the habit of dumping his nightly gathering of night-soil into the river whence the water was drawn, and that the economical city fathers used the public parks as depositories of human excrement.

In the case of the Fiji Islands, other causes are undoubtedly at work in producing the great mortality, which is said to have reached fifty thousand (?). It appears to be a general law that the diseases of civilization act with a frightful violence upon new, savage races. Thus, whole villages of our Indians have been swept away—actually exterminated—almost in a fortnight by smallpox. In civilized communities it is probable that there is handed down from father to son a trace of the acquired immunity against the attacks of these exanthematous diseases, so that every one is, at birth, at least so far protected that the violence of the attack is averted. Among savages the disease finds no such limitation by heredity. To borrow the language of the evolutionists, partial immunity from various exanthemata is, in the European, an acquired specific character which is wanting in the savage. Hence, according to the law of the survival of the fittest, the savage races must disappear unless, before extermination, they can acquire the disease-resisting powers of the white man.

We desire to call attention to the Ophthalmological Congress, the scope of which is explained in the appended extract. We are glad that there is one Centennial congress not to meet in Philadelphia, and have full faith that our New York confrères will do all that can be done to make the Congress a success.

"The International Congress of Ophthalmology will meet in New York City on Tuesday, September 12, 1876, at twelve o'clock noon. The following extracts from the rules of the Congress will give an idea of the general character of the Society, and of the terms of membership:

"1. The object of the International Periodic Congress of Ophthalmology is to promote ophthalmological science, and to serve as a centre to those who cultivate it. It will entertain no discussion foreign to this object.

"2. The number of members is unlimited.

"3. Every member must be either a doctor of medicine, or of surgery, or of science, or possess some other equivalent degree, or be distinguished for his scientific knowledge.

"4. Candidates for admission into the Society shall be admitted on presentation of their diploma or of their scientific title, unless ten members demand a ballot.

"5. The sessions of the Society shall take place every fourth year, and be limited to ten days.

"11. The Society gives no diploma. Before the opening of each session a card available for admission to all the meetings, and signed by the President and Secretary, shall be given to each member on payment of his subscription (fixed at \$2), and upon signature of his name on the register of those attending the meeting.

"Among the members of this Congress are such men as Arlt and Stellwag, of Vienna; Giraud-Teulon, Javal, and Wecker, of Paris; Helmholtz, of Berlin; William Bowman, George Critchett, R. Liebreich, J. W. Hulke, and Soelberg Wells, of London; Donders and Snellen, of Utrecht, Holland.

"It is hoped that many of them will come to New York in 1876. The committee are making all efforts to secure a large attendance, and one that will leave its mark upon the progress of scientific ophthalmology. The co-operation of the profession of the United States in securing these objects is earnestly desired by the undersigned, the Provisional Committee appointed in London in 1872.

"CORNELIUS R. AGNEW, M.D.

"HENRY D. NOYES, M.D.

"DANIEL B. ST. JOHN ROOSA, M.D."

CORRESPONDENCE.

COOL BATHING IN THE TREATMENT OF INFLAMMATORY BOWEL - AFFECTIONS DURING THE SUMMER.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—At our meeting in Louisville I promised to give you an account of my treatment, by cold bathing, of children in the febrile forms of diarrhoea during our summer seasons.

It is only barely necessary to call attention to the difference between cholera infantum and the exhaustive form of infantile diarrhoea comprehended under the common name of "summer complaint."

In the first we have those profuse discharges of serous matter from stomach and bowels bringing on a collapse as rapidly and fatally as a true Asiatic cholera; but the latter is slower in its progress, and always connected with fever due to a congestive and an inflammatory process in the intestinal canal, and is very properly designated entero-colitis. This is the affection commonly seen, while the former is comparatively rare.

We know very well that in many of the ordinary affections (summer complaints) the correction of the secretions of the bowels and a change of location to the pure fresh air of the country will bring about a rapid restoration; but among the poorer classes, and with others often, the change is not practicable; then, too, by reason of the tentative measures for their relief ap-

plied by parents and neighbors, many simple cases go on rapidly to a dangerous stage of the inflammatory process before the doctor is called in. We are summoned, in short, very often, to see a child with a hot skin (temperature $102\frac{1}{2}^{\circ}$ – 105°), rapid pulse (130–150) and breathing (30–40), with frequent purging of semi-fluid, greenish, watery, fecal and half-digested matters; the mouth and tongue are dry, the thirst is intense, but the water given to appease it is quickly thrown off, the eyes are staring, pupils contracted, insomnia, rolling the head and uttering distressing cries, due to the headache from hyperæmia of cerebral vessels and the unappeased thirst.

I proceed at once to give the little sufferer a bath in hydrant-water, which with us, in summer, is about 75° .

I have found it necessary to superintend this for the first time myself, as there is great reluctance, if not decided opposition, on the part of many mothers to its use, because the child always screams lustily as soon as it begins to touch the water. I usually direct the feet and legs to be gradually immersed, at the same time pouring water from the hand over the chest and abdomen, until the whole body is under water. Then the head is held in the left hand, while colder water (cistern temperature— 65°) is poured in a continuous stream over the upper part of the head. This is kept up for ten to fifteen minutes. In the mean while the little patient ceases to cry and struggle, and is evidently greatly comforted, more especially if you give it freely of cool water to drink, the greedy swallowing of which shows how much of its distress is due to thirst.

After the bath the child should be wrapped, unwiped, in a thin woollen shawl, and laid upon its bed with a slight additional covering, and it generally falls at once asleep. The skin is cool, the pulse has lost frequency, fulness, and force; the breathing is slower, while the temperature in the axilla has fallen below the natural standard. The reduction may seem at first too great, but reaction soon begins, and a healthy warmth and perspiration are established. The whole scene, in fact, has so changed that you will have no difficulty thenceforth in getting a bath given three or four times a day, if the alarming train of symptoms make show of revival; and they will revive to such an extent as to require exhibitions of the bath from time to time for two or three days perhaps; for the diseased state of the mucous membrane within has not been as suddenly relieved as the abnormal heat of the body.

In the mean time, internal treatment should be vigorously if not heroically practised. Quinine and whisky, beef-tea, milk- and lime-water, are to be freely employed until the fierce symptoms cease to show themselves. One grain of quinine and half to a teaspoonful of whisky every three hours for a child eight to sixteen months look rather formidable, but they will be borne admirably. As the febrile state becomes subdued, bismuth and pepsin should be given every three hours to restrain the diarrhœa and to assist the digestion, so greatly at fault, owing to the blow which the mucous membrane has suffered.

From my experience I am persuaded that under this plan of treatment nearly every case of entero-colitis may be saved.

For cholera infantum, if seen early, give a hypodermic injection of morphia of suitable dose, to be followed up with small doses of calomel and camphor in sugar of milk, until biliary dejections are seen.

Respectfully,

C. G. COMEGYS.

ATLANTIC CITY, June 29, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The present heated term brings with it so surely its annual slaughter of the innocent children confined to close, unwholesome courts and alleys in Philadelphia, that a further notice of our pre-eminent means of rescue for infants of the poor, the Children's Sea-Shore House at Atlantic City, may prove timely and useful. Your own editorial endorsement of the hospital has already set forth its prominent objects (which may also be found in the advertising columns), and I shall, therefore, restrict myself to narrating very briefly the history of one of my young patients, which illustrates the *practical working* of this noble charity.

Ida G., a little girl of German descent, about three and a half years old, has been for some time running down in health, as a consequence of the irritation and discharge from scrofulous abscesses near the knee-joint, and on the 15th of the current month showed very clearly by her sleeplessness, loss of appetite, emaciation, pallor, and tendency to diarrhœa, that a few weeks more of confinement to the hot, foul atmosphere of a large city would probably terminate her frail life. Sea air was advised, and the advice mournfully rejected by her parents on account of their poverty; but at this juncture two charitable ladies, being informed of the circumstances, contributed the small sum required, comprising in all four dollars for two weeks' board, and three dollars fare for the child's mother going and returning twice (generously reduced one-half by the Camden and Atlantic Railroad Company), so that on the 19th inst. Ida was left under the kind and judicious care of Dr. William H. Bennett, at Atlantic City.

Ten days afterwards, on visiting the Sea-Shore House for the purpose, I found it difficult to recognize my poor, pale, fretful little patient in the bright-eyed, rosy, round-faced child, rocking herself in her chair, and singing as cheerfully as if she had never known the poisonous influences of a "man-made town." The change was marvellous; and, to an individual who has not repeatedly tested the life-renewing efficacy, in suitable cases, of iodine, bromine, etc., in ocean water, air, and sunshine, seems almost incredible; but it is one which can, and I hope will, be witnessed by scores of my professional brethren who may try the delightful experiment of sending little sufferers like Ida to this real *Succor of the Innocents* on the shore at Atlantic City.

Very respectfully yours,

JOSEPH G. RICHARDSON.

FORT LEAVENWORTH, KANSAS, April 2, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Please find appended the diagram of an apparatus which I have used successfully in treatment of wound of the tendo Achillis. It consists of a slipper to the bottom of which a plate of iron,* extending three or four inches beyond the heel, is riveted. The extremity of this is connected with a broad band passing around the limb below the knee, as represented in the figure. This controls, in some measure at least, the contracting of the gastrocnemius, and I consider it fulfils the indication for treatment of this lesion better than any method heretofore described.



Very respectfully yours,

T. E. WILSON,

Assistant-Surgeon U.S.A.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 22, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

(Continued from page 654.)

Aneurism of abdominal aorta.

DR. JAMES GRAHAM presented the specimen, and furnished the following history:

"H. S., æt. 26 years, married, was a strong, well-made man, a stoker at the gas-works, whom, some four years ago, I attended for chancre and bubo. Since then he married, and has had three children, all of whom suffered from syphilis.

"On the 8th of this month he consulted me in relation to a pain shooting around from the lumbar region to the groin, on the right side, with which he had been troubled for upwards of a month; it was irregularly intermittent, sharp, shooting in character, severe enough to prevent him from working, yet he had not applied for any medical treatment. Six weeks before he had returned from a trip to Antwerp, having worked his passage over as a sailor, and back as a stoker.

"As he lived in a malarious section of the city, I put him on quinine, and ordered him to report at my office in a few days; but on the following day I was called in great haste, and found him pale, remarkably cool and clammy over the entire body, with feeble pulse and violent pain in the præcordial region (severer, he said, than anything he had ever suffered in his life before), shooting to the left shoulder and down to the elbow; also great burning in his stomach. It had come on suddenly while at stool, at nine o'clock in the morning. Stimulants were given freely, heat and mustard-poultices applied externally, and the pillows removed from under his head. He rallied a little, and was more comfortable up to six o'clock in the evening, when the pain again increased in violence; he had to be supported in the

semi-erect posture, and he continued in great agony until his death, at three o'clock the next morning.

"*Post-mortem examination*, fifty-eight hours after death. Rigor mortis well marked. In the thorax nothing abnormal was found, but on opening the abdomen an immense clot of blood was discovered, hiding all the viscera, and reaching from the diaphragm into the pelvis. All the organs were normal, except some enlargement of the kidneys. The cause of the hemorrhage was found to be a ruptured aneurism, the size of an orange, connected with the front part of the abdominal aorta, just above the origin of the cœliac axis: it was injured in exposing it, so that the size of the rent could not be determined. The great omentum was distended with blood, and hung down like a bag in front of the intestines. It was uninjured, and we concluded that after the blood had broken into and filled the cavity of the great omentum, it had flowed through the foramen of Winslow into the general peritoneal cavity so slowly as to prolong life for a number of hours."

DR. JOHN GUITÉRAS asked whether there was caries of the vertebræ, because the pains described generally occur when there is caries. He was reminded of a case where the pains were so severe that preparations were made for section of the anterior crural nerve, when a pulsating tumor in the back was discovered to be the cause of what was thought to be simply a neuralgic affection. The autopsy revealed a large aneurism, with extensive disease of the vertebræ.

DR. GRAHAM replied that there was no caries.

Cancer of the liver.

DR. O. H. ALLIS presented the specimen, and read the following report from Dr. MIXSELL, of Easton, Pennsylvania:

"P. R., aged 50, hotel-keeper, sedentary habits. I was called to see him January, 1875. He had then been sick one month. The pulse was found normal, tongue clean, and bowels regular; urine markedly albuminous. There was œdema of the extremities, with serous accumulation in the serous sacs, three pints of turbid serum being drawn from the abdominal cavity. Death occurred in April, possibly from starvation.

"*Autopsy*.—The liver was enormously enlarged; the heart, lungs, and stomach were displaced, and the peritoneal cavity filled with pus and serum.

Fracture of the skull.

DR. W. S. FORBES presented the specimen, and furnished the following history:

"James McG., aged 22 years, was admitted to the surgical ward of the Episcopal Hospital on the 16th of April. He walked to the hospital from his home, several squares distant. He had been in the dispensary of the hospital three days before, and stated that in a fight he had received a blow on the side of his head with a stick. He was advised to come into the house at once, but he declined doing so.

"When he entered on the evening of the 16th, he was found to have a compound fracture, with slight depression, at the anterior inferior angle of the left parietal bone. During the evening he was dull and stupid, but could be aroused when urged; and, while he could not pronounce his name, he could write it on a slate, and answer intelligently in monosyllables. He was given a purge, and a pledget of lint placed over his wound, with directions to be kept quiet in bed.

"When I saw him, for the first time, on the morning of the 17th, four days after the accident had taken place and some fourteen hours after he had entered the house, there were no symptoms of depression, and he was perfectly rational.

"He was ordered one-fourth of a grain of calomel every four hours, counter-irritation to the nape of his

neck, dry cold to the top of his head, and the wound to be dressed with wet lint covered with oiled silk, and low diet to be given. Under this treatment he continued to remain very well.

"On the morning of the 23d there was a very slight expression of facial paralysis on the left lower side of the jaw and corner of the mouth. One-fourth of a grain of opium was added to the calomel.

"On the morning of the 25th his condition was all that could be desired under the circumstances. Normal pus came from the wound, moderate in quantity; he had no pain, his skin and pulse in good condition. Early on the morning of the 26th there was a sudden change for the worse. The respiration became stertorous, the pulse rapidly rose to 154, and intermittent in a marked degree, a red, frothy matter flowed freely from the right nostril, coma set in, he became cyanosed, and died on the morning of the 26th, about ten o'clock, thirteen days after his accident.

"An examination was made twenty-six hours after death. The membranes of the brain were somewhat congested; there was a depressed, stellated fracture beneath the external wound; the external table of the bone was found extensively fractured, and more depressed than the external lobe, but there was no unusual expression of inflammatory action in the neighborhood of the fracture.

"The left ventricle was filled with serum and some pus. There was a large abscess in the posterior part of the right cerebral hemisphere."

Compound fracture of skull, multiple fractures of vertebræ and ribs, laceration of spinal cord.

Dr. JOHN ASHHURST, JR., reported this case, from notes furnished by Dr. J. C. MERRILL. The patient, a man 22 years of age, was brought to the Episcopal Hospital on the morning of May 3, 1875. About one hour before he had jumped from a train of cars while in motion, striking the parapet of a bridge, and thence falling head-foremost to the ground below. On admission, a small contused wound was found in the scalp, and the latter was separated from the skull over a considerable distance, but no fracture could be detected by the finger. There were slight symptoms of cerebral concussion. Between the scapulæ there was a very severe contusion, with extensive ecchymosis, and a general rounded projection of the spines of the upper dorsal vertebræ. There was complete paraplegia, the loss of sensibility reaching to an inch below the nipple on either side. The temperature of the paralyzed parts seemed abnormally high to the hand, but was not tested with the thermometer. There was retention, with partial suppression of urine, but no priapism.

The patient survived about twenty-six hours, having become comatose a short time before death.

An autopsy, which was unavoidably hurried, was made thirty hours after death, and revealed an extensive stellate fracture of the left parietal bone, with slight depression of the outer and greater depression of the inner table. The meninges were congested, but not lacerated, and the brain was normal. There were comminuted and partially impacted fractures of the bodies of the fourth, fifth, sixth, seventh, and eighth dorsal vertebræ, with fractures of the heads of the corresponding ribs on either side. The fourth dorsal vertebra was displaced towards the right, and at a point corresponding to the junction of the third and fourth vertebræ the spinal cord was almost completely severed, its continuity being maintained by means of a mere shred on the right side. The spinal meninges were much congested, and a spicula of bone was found in the substance of the cord. The vertebral canal contained a large quantity of fluid blood. The other organs of the body were not examined.

Cystic mammary tumor.

Dr. ASHHURST also exhibited a large mammary tumor removed a few hours before from an unmarried woman, aged 51. The tumor had originated two years ago, beginning as a small, hard nodule. Very little pain had attended the growth of the mass, which was chiefly annoying from its size and weight. Some portions appeared to be of almost cartilaginous hardness, while in other parts large cysts had been developed, and one of these had ulcerated, discharging a large quantity of sero-sanguineous fluid, and then healing. The tumor was not adherent, and though at the operation it was found to extend around the edge of and to send a prolongation beneath the pectoral muscle, it did not at all infiltrate the adjoining tissues. The tumor appeared to be entirely surrounded with a distinct capsule, the solid portions being of firm, fibrous consistence, and the cyst containing a thin serous fluid together with a considerable quantity of a brownish, honey-like substance.

The specimen was referred to the Committee on Morbid Growths, which reported, May 27, 1875, as follows:

"The Committee on Morbid Growths have examined the large mammary cystic tumor presented by Dr. Ashhurst, and find that certain portions of the cyst-wall presented small secondary cystic formations, which were of an irregular roundish shape. These cavities are lined with a cylindrical epithelium, but, instead of being perfectly smooth, have numerous in-growing papillary projections, giving to the transverse sections a peculiar racemose appearance.

"These cysts have originated from dilatation of the lacteal glands and ducts. They are surrounded by an eminently sarcomatous tissue, presenting in alternating preponderance rounding and fusiform cells. The active proliferation of this sarcomatous tissue has caused it to invade the lumen of the lacteal tubes at points completely occluding them, and thus leading to their cystic distention.

"The growth, therefore, may be pronounced a *cystic sarcoma*, comparatively rare in this site of the body, yet warranting a much more favorable prognosis than can be made in the carcinomatous varieties."

Excision of the knee-joint.

Dr. ASHHURST also exhibited the portions of bone removed in a case of excision of the knee-joint, performed for gelatinous arthritis of one year's duration, in a boy six years old.

REVIEWS AND BOOK NOTICES.

A MANUAL OF DIET IN HEALTH AND DISEASE. By THOMAS KING CHAMBERS. H. C. Lea, Philadelphia, 1875.

This is certainly a most excellent book; avoiding much useless lumber that is common to works of its class, and containing a great deal of valuable information, imparted in a very lively and interesting manner. It is divided into three parts, General Dietetics, Special Dietetics of Health, and Dietetics in Sickness. As we read that part of the first section which treats of the choice and preparation of food, our heart, or rather stomach, longed to dine with Dr. Chambers; but no!—just as we have often found that those who write most strongly against the prevention of conception have the smallest families (probably by a special dispensation of Providence), it may be that our friend's book is better than his dinners. Still, we would like an opportunity of testing the matter.

The second part discusses the proper feeding for

various stations and occupations of life, training, effects of climate, starvation, poverty, etc., and is really very entertaining. The hints to travellers are most timely and practical. Dr. Chambers must have well used his vacations. The chapter on alcohol, whilst we are inclined to commend its defence of the moderate use of the "poison," is the weakest thing in the book; indeed, in its science it is as weak as a homœopathic dilution, and betrays a singular ignorance or an equally singular ignoring of the work of every one besides that of Dr. Chambers.

The section on the dietetics of disease is good, and contains a number of recipes which render it of great value. So far as concerns the work of the publisher, the volume stands on the well-known level of Mr. Lea's books.

SELECTIONS.

PAGET ON GOUT IN SOME OF ITS SURGICAL RELATIONS.—In a course of four clinical lectures published (in abstract) in the *British Medical Journal* for May 15, 22, 29, and June 5, Sir James Paget, after observing that gout is rather found in its typical forms in private than consulting practice, stated that in the latter it has been more carefully studied. There is a large number of comparatively trivial diseases which belong to the gouty constitution, and which commonly pass under the name of incomplete, anomalous, or suppressed gout. Also gout affects the consequences of injuries and diseases other than itself. It is very rare for the offspring of well-marked gouty parentage to pass the middle or elder periods of life without manifesting some degree of the gouty constitution. Gout, too, is greatly modified when it is mingled with other constitutions,—with the scrofulous, the tuberculous, the cancerous, or any other. One of the commonest methods of developing manifestations of the presence of gouty tendencies is an injury. A person with a gouty constitution has a fall or other injury, and in a few days there comes a fit of gout. In such cases there has been a condition so justly balanced that so long as the right nutrition of the several textures is not interfered with they hold their usual course, but that when anything occurs to interrupt the process of nutrition, which makes the various textures feebler, or which tends to bring out any degeneracy, then comes out the special form of disease; for what happens with the gouty occurs also with most other constitutional conditions. As a blow on the breast elicits cancer, so an injury of any kind may bring out gout. If a person with gout about him strike his foot, the gout will appear there; if he wrench his wrist, the attack will come in his wrist. Still more is this likely to occur in rheumatic gout than pure gout. Blows to the hip-joint in such persons are very liable to produce gouty arthritis of that joint. Arnica used externally is apt to produce an erysipelatous condition of the skin in the gouty. Gout, too, modifies many common inflammatory processes; as, for instance, gouty bronchitis, gouty periostitis; and it is of importance to be able to recognize the gouty characteristics in such inflammations. Such gouty tendencies have a tendency to paroxysmal manifestations. The remote consequences of gout after injuries deserve to be carefully noticed. Such persons as are gouty recover more slowly and less perfectly from injuries than others; and in cases where injured parts remain painful, or there is abiding stiffness, gout should be suspected, especially in persons of advanced life.

Gout is sometimes mingled with scrofula. Such is the case in children one of whose parents was markedly gouty, the other markedly scrofulous; and in such pa-

tients inflammation which commences as gout may drift into true scrofulous inflammation. Such cases are very important, and the altering features of the case should be carefully noted and the treatment modified accordingly. Instead of passive movement and shampooing, splints and rest become indicated. Even older persons than children may present such changes. A case occurred lately, in which a person who had long been gouty, and whose tissues were degenerate, was at length attacked with scrofula, which he had escaped in early life. Blended gout and scrofula form a very bad inheritance. Gout, too, exercises an influence upon gonorrhœa and the progress of syphilis. Gouty persons with gonorrhœa are liable to attacks of inflammation in the joints or the sclerotic. Gout mingles, too, with syphilis, especially in its secondary and tertiary manifestations.

Syphilis in a person with blended scrofula and gout will produce a very different series of events from those which the same poison will produce in a perfectly healthy person. Such modifications have been too little studied in connection with syphilis. It might, for instance, be doubted whether syphilis ever produced destructive ulceration of the nose, except in those who were either tuberculous or scrofulous. Again, that form of chronic synovitis that was associated with tertiary syphilis was generally seen only in the gouty. Mercury must be cautiously administered in cases of mixed syphilis and scrofula. For syphilis mixed with gout, iodide of potassium with alkaline waters forms the best line of treatment. Cancer in the gouty is unusually painful, and potash often relieves the pain very effectually.

The minor signs of gout in the hands and feet were next considered. It will not do to build a diagnosis of gout upon any one of these minor ailments alone: the diagnosis must rest upon a number of the smaller features of the case carefully collected and fitted together. If many be found together, or in quick sequence, the diagnosis is almost as certain as if well-marked gouty inflammation of the great toe were found. A very large proportion of the first attacks of complete gout occur in the toe or foot. Less complete forms are common, as darting pains in the toes or knuckles after errors in diet. Still more suggestive is it if the pains be in the heel or tendo Achillis. In the examination of elderly persons, it is quite as necessary to examine their knuckles as their tongue. Gouty hands often look as if they were shortened, especially in the fingers. There are the true globular, rounded, and hot, gouty joints, and also the flattened form of more chronic changes. The palmar fascia is very apt to become affected. A number of old people are seen with their fingers drawn down to the palm, and especially their little finger. If they live long enough, all the fingers may become so affected, the index-finger being least so. Any man who is in the habit of grasping tools tightly is liable to such change in the palmar fascia. Men engaged in lock- and key-making, wire-drawing, etc., are very subject to this condition. Gardeners, and persons who use walking-sticks much, and more so if the sticks be badly shaped, are similarly affected. Such thickenings must not be confounded with the scars of old abscesses or injuries. In gouty cases, the integuments adhere firmly to the palmar fascia. Similar affections may occur in the foot, and often are very troublesome, requiring the boots to be frequently changed.

For the treatment of affections of the fingers and toes, gentle compression, aided by wet linen and oiled silk, is good, and may be continued for the relief of the resultant thickening in the form of a firm bandage. In contraction of the palmar fascia, stretching the hand out on the table several times a day is good.

When the fingers are drawn down, little can be done,

and section of the tendons, if giving temporary relief, is apt to produce greater contraction ere long. Operative treatment will generally lead to a worse state of things than existed ere it was resorted to.

Gout is very liable to affect the nervous system, the sensory rather than the motor nerves, however. It produces intense pain oftener than cramp. This is shown in the intense painfulness of an ordinary gouty attack, a painfulness out of all proportion to the other phenomena of the inflammatory attack, and especially disproportionate to the structural changes in the part attacked. Neuralgiæ, as sciatica and brachial neuralgia, are very common in gouty persons. Various shifting neuralgia in a person of or over middle age should always excite a suspicion of gout. Gouty neuralgiæ are more fitful, more quickly and readily affected by indigestion, errors of diet, and other similar influences, than other neuralgiæ. Then there are some morbid sensations of the skin, even more suggestive of gout. Such are (1) burnings in portions of the skin—hot, burning patches in the thighs, or other parts, as the palms or soles; these sensations, however, are not limited to any particular localities of the skin. The affected portions of skin look healthy, or only slightly flushed; and though the patient complains much of the pain, as burning or scalding, no organic changes appear to ensue. (2) Numbness or tingling of a limb, or of any portion of one—the feeling as if the part was asleep—are also gouty indications, and they may exist for months or years. Such feelings cause great distress in nervous persons, who are afraid that they foretell paralysis or other serious trouble. Paralysis, of course, may be so preceded; the fears in the majority of cases, however, are groundless. Gout should be carefully looked for if these sensations be of long duration in persons whose nutrition is good, and if there be no change of temperature or wasting.

In the hypochondriacal and the hysterical, gout may supply morbid sensations, to which the mental state is only too ready to give color and intensity. The pain itself is real, but those patients aggravate it by errors both of observation and judgment: of observation, because they study it with a morbidly close attention; of judgment, because they assign wrong causes for its presence. Probably there is no special connection betwixt gout and hypochondriasis, but they mutually aggravate each other, and cause much misery which it is often difficult to cure, or, indeed, even to relieve.

Cramps and sudden "catches" in over-action are also found in connection with gout; and in some persons they are, at certain times, almost sure to follow any sustained or awkward movement.

The relations of gout to the urinary organs may be traced in its relations to the lithic acid diathesis. Among elderly persons, a large proportion of cases of lithic acid calculi, and lithic acid gravel, are in those who bear marks of gout; a fact which justifies the assumption that gouty attacks are intimately connected with, if not possibly due to, an imperfect elimination of lithic acid by the kidneys. The appearance of lithic acid or of lithates in the urine is suggestive of gout. Acute inflammation of the mucous membrane of the bladder, with pain and distress, chiefly before micturition, extending to the perineum, rectum, and suprapubic region, and with burning sensations in the urethra, is associated with gout. With these general signs there are more special ones, as the nocturnal occurrence, or dyspepsia, the suddenness of the attack, its sudden subsidence, its relapse, or its metastatic character. Gouty orchitis is not uncommon, and is frequently followed by the presence of fluid in the cavity of the tunica vaginalis. It is prone to relapse; it passes from one testis to the other, and also comes on suddenly. Gout affects the course of urethritis; and in gleet in the

gouty, relapses are apt to follow errors in diet or in drinking. The gouty urethritis is found where there has been no infection, and is itself free from infectiousness. Prostatic disease or enlargement is very frequent in the gouty; so, also, are alterations in the penis. There are fibrous thickening and hardening of the corpus cavernosum, and the changes are similar to those of the palmar fascia described above. The affection is chronic, but harmless. Painful and persistent erections at night are also found most commonly in the gouty, especially in the incomplete forms and with excess of lithates. Bromide of potassium or ammonium is here very useful.

Gout, too, affects the skin, in the form of psoriasis, eczema, urticaria, prurigo, pruritus, etc. The relation is not to be found in any anatomical features, or in any peculiarity of appearance. In such cases the patient's constitution is more important than the anatomical characters of the local disease. For example, if eczema be found in a patient who has had regular gout, there must be a strong suspicion that the eruption depends upon gout, and the case must be treated in this view. Such treatment is as much called for here as in the case of inflammation of a joint in one known to be gouty. The sudden appearance, especially at night, the connection with indigestion or unusual diet, point to the origin. The old rule that such patients should have nothing salt, strong, sweet, or sour, is a good one. The classification of skin-diseases, grown so minute of late, founded mainly on an anatomical basis, leaves out too much the constitutional conditions with which the disease is associated, which is of paramount importance. Ulcers, too, are common in the gouty, especially the eczematous ulcer about the ankle. This is an eczema of which some portion is the seat of thin, shallow ulceration. There is much severe pain, especially on lying down and in bed. In the warmth and quietude of bed the pain becomes agonizing. Such ulcers are commonly associated with varicose veins; not the large tortuous veins, but small clusters of veins, often of bright hue, collected round the ankle or some portion of the leg. Some think the varicose veins the cause of the ulcer, but this view is a fallacy. Incomplete gout is the cause, and the presence of varicose veins is only a coincidence.

Gouty affections of the digestive organs were next referred to. Many persons can foretell the oncoming of gout by the appearance of their tongue. Psoriasis of the tongue is also a gouty affection. It is difficult to distinguish this affection from syphilitic psoriasis, and the diagnosis rests on the general environment. There is thin, opaque, white covering over the mucous membrane, like the layer of mucus left by the snail when tracking its way over wood. Diseases of the palate and pharynx are also among the list of gouty affections; and elongated uvula in elderly persons is very suggestive. The gouty dyspeptic is troubled with acidity and flatulence, is easily disturbed by errors of diet, and has "bilious" headache. Often the dyspepsia so induced is accompanied by burning in the knuckles, or in the palms and soles, or by some neuralgia in the scalp. The ready disturbance caused by certain articles of diet in those persons forms a capital diagnostic indication. Gout affects the circulation, and surgically is most seen in gouty phlebitis. It is, perhaps, one of the most frequent of the forms of irregular gout.

Gout, indeed, Sir James Paget remarked, mixes itself with whatever malady is present in the patient. Of course the treatment of a gouty man is different according as it is blended with scrofula or syphilis or occurs in the nervous or the healthy. Colchicum often is useful: There are three things that have to be considered for all gouty persons. First, they should drink an extra quantity of water, especially in the early

morning, before any food is taken. Secondly, those who have lithic acid or lithates in excess should take alkaline instead of pure water. Many waters, as Carlsbad and Vichy, are very useful; and those that are purgative as well as alkaline may be employed when the bowels are confined. Often the skin needs good washings with soap, and thorough rubbing as well as mere warm baths. It is a good plan to adopt the German practice of going to bed for a while after the bath. If English baths were worked with the same care in this respect as is the case abroad, more good would result from them.

In conclusion, he said that what was in his mind was chiefly this: first, the broad general rule that disease is not to be studied as if it could be learned by morbid anatomy alone; and next, that amidst the forms of constitution to be studied in surgery, the gout is an important one, and that it has not only complete and typical forms, but also minor characters, which, if occurring in any number in the same person, or in different members of the same family, might be as sure evidence of gout as the most typical inflammation of hand or toe, and that the gouty element is important in the matter of treatment.—*J. Milner Fothergill, M.D., in The London Medical Record.*

GALLOPING MALIGNANT SYPHILIS.—The presence of two patients in the wards of St. Louis Hospital was the occasion of a clinical lecture on the above malady by Dr. E. Guibout, a full report of which is contained in *L'Union Médicale* of May 25 and 27, 1875.

In contrast with the usual history of syphilis, the secondary and tertiary lesions slowly developing themselves, the two patients under consideration, only six weeks after the appearance of the chancre, were terribly disfigured, and rendered hideous and repulsive, by the enormous black and sanious crusts which covered the greater part of the scalp, face, trunk, and limbs. There were very numerous and very large ulcerations, and from beneath and across the crusts which covered them there flowed incessantly a disgusting mixture of pus and blood. The countenances were pale and thin, eyes lack-lustre, the lips dry, and there was the profound and indefinable expression characteristic of the disease. There was also intense fever, prostration, diminution of vital forces, loss of appetite and of sleep; in short, a general and very severe disturbance of all the physiological functions. In consideration of the phenomena presented by these cases, so different from those usually shown in syphilis, the titles *malignant* and *galloping* have been applied: *malignant* because of the gravity of the cutaneous lesions and of the general condition of the patient; *galloping*, because of the rapidity of the invasion, development, and progress of the local and general lesions.

The form of syphilis under discussion may present itself at two different epochs. It is sometimes *precocious* (*précoce*) or *primitive*, sometimes *tardy* or *consecutive*. The precocious or primitive form occurs when it is the first of the general lesions of syphilis, when it succeeds, with scarcely any delay, the infecting chancre. Such was the form as it appeared in the two cases forming the subject for the lecture. Coming on only six weeks after the infecting chancre, and without the appearance of any other lesion of the skin, there were developed on the head, trunk, and limbs the ulcerations and the crusts of rupia of the gravest form, accompanied with excessive disturbance of the health.

At other times the form is *tardy* or *consecutive*. Suddenly, and with alarming characteristics, it supervenes at a late stage of the syphilitic career, after the ordinary constitutional phenomena. There comes over the patient at the same time a change so rapid, profound, and marked that it is impossible not to see something serious is in store.

When we come to consider the cause of the invasion of malignant syphilis, it is found that the late form, that is, that which accompanies the ordinary early cutaneous lesions, or is consecutive to them, is due to the want of proper treatment, to bad hygiene, or to a deterioration of the general health of the patient in consequence of fatigue or of various excesses. The same causes hold good for the precocious, galloping, malignant syphilis. The primary manifestations of syphilis may be malignant if the patient's constitution is poor and his surroundings unfavorable to a healthy hygienic condition.

If the prognosis of syphilis in its most common and benign form is always unfavorable, much more so will it be in the malignant variety.

Its treatment presents great difficulties, and requires all that medical skill and clinical science can command. One needs to consider not only the disease, but even more, perhaps, the patient. Great caution is necessary about prescribing the specifics,—mercury and iodide of potassium. Doubtless these remedies are indicated by the disease, but they are contra-indicated by the state of the patient. In an intensely febrile state, with gastro-intestinal troubles, they would not be tolerated; they would only aggravate the accidents. Above all, the patient must be placed in the best hygienic conditions possible. He should have as much sunlight and out-of-door life as he can endure and the temperature will admit of, together with tonics, opiates, and a generous diet. Later, for the ulcerations and tertiary lesions, the specifics in small doses may be employed.—*Boston Medical and Surgical Journal.*

GLEANINGS FROM OUR EXCHANGES.

ATRESIA UTERI (*Transactions of Ninth Annual Meeting of the Medical Association of the State of Missouri*).

—Dr. Todd reported the case of a young married lady 20 years of age, who had been troubled with dysmenorrhœa ever since reaching the age of puberty, and had never been pregnant. For relief of stricture of the cervical canal, and possibly of antelexion, she had twice, during the last two years, been subjected to operations in one of our Eastern cities. At the first operation the intra-vaginal cervix had been bisected, and the cervical canal incised. For some reason a second incision of the cervix was performed six months after the first operation. After the second operation she menstruated once, without pain and freely; then a second period passed, painful with scanty secretion, and at the next two succeeding menstrual periods there was no effort at menstruation whatever.

At this period in the history of the case Dr. Todd saw the patient. Three attempts were made, with the aid of a strong light, the womb being dragged down almost to the vulva, without discovering any remaining trace of the cervical canal, except the slight indentation where the os externum should have been. The womb was again dragged down forcibly, restoring any possible deflexion of the axis and enabling the operator the better to guide the bistoury in the axial line of the organ. Partly with a narrow-bladed bistoury, and partly with a strong steel probe, an opening was made into the uterine cavity, which was afterwards widened with the hysterotome. A probe was passed to the fundus, showing a depth of one and a half inches, and indicating a small uterus. Tents of soft linen smeared with glycerin were passed daily for a week, after which one of Chambers's uterine stems was passed, and was still being worn. Two menstrual periods had since elapsed, attended with abundant

and painless flow. The stem will be worn until there is no further tendency to contract.

DIVISION OF THE TENDO ACHILLIS IN CERTAIN INJURIES ABOUT THE ANKLE (*Boston Medical and Surgical Journal*, May 27, 1875).—Dr. S. Say reports the case of a laborer, æt. 45, who fell from a step two or three feet high, striking on the pavement on the left side. He was found to have fracture of the left fibula, an inch and a half from the lower extremity. The symptoms were crepitus, increased mobility, and local tenderness. The foot was dislocated on the tibia backwards and outwards, as was indicated by the undue prominence of the heel behind, of the lower end of the tibia in front, and by the inability to flex the foot to a right angle. The internal lateral ligament was partially ruptured, giving a deformity not unlike that seen in equino-valgus. The leg was placed in a fracture-box, but all efforts to remove either the lateral or antero-posterior deformity were unsuccessful. On the fifth day the patient was etherized, and renewed but unsuccessful efforts were made to remove the deformity. The tendo Achillis was divided, and the foot restored to its natural position. The leg was replaced in the fracture-box, the foot kept at a right angle to the leg by a foot-piece, and the lateral deformity removed by side-pads. The subsequent treatment gave very little trouble. The straps and pads required adjusting only once in two or three days, instead of two or three times a day, as before the tenotomy. The patient suffered no pain whatever after the operation. He was discharged five weeks after the injury, when he could walk with a cane, and had only a slight limp. Four months after the injury he reported himself quite well. There is no reason to fear a non-union of the divided tendon, for an ununited tendo Achillis is almost an unheard-of event.

RESIN OF ALOES (*Edinburgh Medical Journal*, June, 1875).—Dr. William Craig has found, by a series of experiments upon man and the lower animals, that the following conclusions are fairly deducible:

1. That aloes may, by exposure to the air, undergo considerable chemical change without losing its physiological action as an active aperient.

2. That the resin of aloes, when thoroughly exhausted of aloin, possesses no purgative properties, and therefore cannot be the active principle of aloes.

3. That the resin of aloes is not the cause of the griping which sometimes follows the administration of the drug.

4. That aloin is an active aperient, and is, in all likelihood, the active principle of aloes; and is sufficient to account for all the purgative properties of that medicine.

Aloin possesses several advantages over the crude drug. Being uniform in strength, its dose can be more accurately determined; its dose being half a grain to one grain, it can easily be introduced into tonic pills without making such pills too large. By using it we get rid of all impurities which are so apt to cause griping.

The following is an excellent pill for the constipation so common to females of a sedentary habit:

R Aloin, gr. ss;
Ferri sulph. exsic., gr. iss;
Ext. nucis vom., gr. ss;
Ext. belladonnæ, gr. ss.

Ft. pil. One or two pills daily.

SUCCESSFUL CASE OF TRANSFUSION (*The Lancet*, June 19, 1875).—A lady, æt. 40, after having had several miscarriages, sailed from New York for France, at a time when she was far gone in pregnancy. She was confined on board the vessel, had considerable hemorrhage, but nursed her child, and succeeded in reaching Paris. There she had severe loss of blood, and was

conveyed to the Maison Municipale de Santé, where the hemorrhagic attacks became more frequent, and she became fearfully anæmic in spite of ergot, brandy, and bark. At last she was so reduced, and the loss of blood so frequent, that plugging, compression of the aorta, and binding up of the limbs were practised; but all to no purpose. Finally transfusion was performed, the blood being obtained from a young ward attendant, in good health, who kindly volunteered his services. About six ounces were thrown into the patient's median cephalic, with a little loss, by means of Matthieu's apparatus. For about thirteen days the greatest care was taken of the patient, and the pulse, temperature, and the proportion of globules were carefully noted. She gradually recovered, and left the hospital six weeks after admission, and thirty-six days after the transfusion, which had been effected with *undefibrinated* blood.

TREATMENT OF OZÆNA (*The Lancet*, June 19, 1875).—In the second number of the new Paris bi-monthly periodical devoted to diseases of the ear and larynx, M. Tillot discusses the subject of chronic rhinitis and its treatment. He justly says that in this respect therapeutics has not kept up with improved means of diagnosis of the condition of the whole nasal tract by means of specula and the laryngoscopic mirror. The method, however, which he pursues, and with a considerable degree of success, is simply as follows: 1, medication directed against the diathetic state of the patient; 2, free cleansing of the mucous membrane from all crusts of inspissated secretion; and 3, direct applications to the membrane. The third object is obtained by means of slightly astringent powders or by the administration of these substances suspended in water and used in the spray-producer. M. Tillot has used for that purpose the mineral water of St. Christian (Basses-Pyrénées), which is a nearly cold, odorless, tasteless water, containing iron and copper, with some traces of iodine and arsenic. He appends several cases both of simple chronic rhinitis and of ozæna, in which the adoption of this plan has led to considerable relief, and often cure. The hint of employing the "spray-producer" is one worth bearing in mind.

OPIUM OR SALICIN IN DIARRHŒA (*Detroit Review of Medicine and Pharmacy*, July, 1875).—Dr. J. C. Bishop, after discussing the physiological action of opium and salicin, and giving a number of cases occurring in his own practice, comes to the following conclusions:

- 1st. Salicin is perfectly harmless, even when administered to very young children; opium is not so.
- 2d. Salicin increases the appetite and promotes digestion; opium destroys the former and retards the latter.
- 3d. Salicin may be administered to the most delicate stomach without any ill sequences, while opium is absolutely contra-indicated in many persons, who possess a peculiar susceptibility to its action.
- 4th. Salicin has no appreciable effect upon the brain, while opium induces a hyperæmia of that organ.
- 5th. Salicin possesses valuable antiseptic properties, while opium, if it possesses any, does so in a very feeble degree.
- 6th. Salicin is an antiperiodic, while opium has no notable effects in that direction.
- 7th. Salicin prevents the putrefactive changes in the contents of the bowel; opium does not.

CROUP AND DIPHTHERIA (*The Lancet*, June 19, 1875).—Dr. Wm. Carr calls attention to the following case as aiding in establishing the proof that a primary fibrinous croup may exist which has nothing in common with diphtheria as an infectious disease, and which not uncommonly follows and is the sequence of a catarrh of the larynx.

A boy, suffering from measles, was admitted into the Charité, with laryngeal catarrh strongly developed, and

yet there was nothing to be seen in the throat beyond simple angina. The hoarseness, however, continued for some days, even after the diminution of fever. After four days' duration the temperature rose, and in a few hours croup was developed, for which tracheotomy was performed. From the aperture in the trachea a long plastic tube of membrane was drawn out. The canula was retained for ten days, and the child recovered. Such cases prove that true croup may be developed from a catarrh; but it must be confessed that at the present time cases of true croup compared with those of infectious diphtheria are of rare occurrence.

PATHOGNOMONIC SIGN OF LUXATION OF THE HUMERUS.—Professor Dugas, some years ago, described in the American Medical Association a new method of diagnosis in luxation of the shoulder-joint. The subject has been recently revived in the *Nashville Medical Journal*, which gives the following description: "If the fingers of the injured limb can be placed by the patient or by the surgeon upon the sound shoulder while the elbow touches the thorax, *there can be no dislocation*; and if this cannot be done, there *must* be a dislocation. In other words, it is *physically impossible* to bring the elbow in contact with the sternum or front of the thorax if there be a dislocation; and the inability to do this is *proof positive* of the existence of dislocation, inasmuch as no other injury of the shoulder-joint can induce this inability."

MISCELLANY.

PHOSPHORUS-POISONING.—Some interesting experiments have recently been made by MM. Thiernesse and Casse on the value of injections of oxygen into the veins as an antidote to phosphorus-poisoning, and they found that its power of neutralizing the toxic effect was very great, the symptoms of poisoning soon ceasing. The poison was in some cases injected into the veins, dissolved in oil, in others administered by the mouth. The oxygen was at first injected dissolved in defibrinated blood, but it was found that the quantity of oxygen that could be introduced in that way was insufficient to counteract the poison. The injection into the veins of pure oxygen, however, was perfectly successful. The experimenters found it necessary that the gas should be pure, free from all admixture with air, and that it was requisite to introduce it slowly into the circulating current. The quantity necessarily was large, several hundred cubic centimetres being required for an animal weighing twenty pounds. The precise apparatus employed is not described.—*London Lancet*.

LOW TEMPERATURE FROM EXCESSIVE DRINK.—Dr. Shattuck (*Boston Medical Journal*) reports the case of a man who at one time drank *three champagne bottles full of brandy*; how much more is not known. Twenty-four hours after this spree he was found comatose in a freight-car. The temperature, taken in axilla and rectum, by at least two thermometers, was 76° Fahrenheit. Twelve hours afterwards it had come up to 91° Fahrenheit. He entirely recovered.—*Detroit Review of Medicine*.

A CHARITABLE WISH.—Dr. Grabham, in a lately published pamphlet on the "Origin, Varieties, and Terminations of Idiocy," relates that one of his lady

correspondents, the mother of a patient, writes to him that "her late husband used to say that there was no such place as hell, but she hopes now he has found out his mistake."

It is stated that nearly all the men selected for the British Arctic Expedition are of a fair complexion. Scoresby's test was an ingenious and probably a good one. Each candidate was obliged to stand with his bare feet upon a cube of ice, and those who endured longest were chosen.

WARTS.—Dr. Guttzeit recommends rubbing warts night and morning with a moistened piece of muriate of ammonia. They soften and dwindle away, leaving no such white mark as follows their dispersion with lunar caustic.—*Eclectic Medical Journal*.

By a vote of 138 to 27, the English House of Commons recently granted two thousand pounds sterling for medical researches. When will our Congress grant the first cent?

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JULY 6, 1875, TO JULY 12, 1875, INCLUSIVE.

HEAD, J. F., SURGEON and MEDICAL DIRECTOR.—Leave of absence extended twenty-five days. S. O. 21, Military Division of the South, July 8, 1875.

COOPER, GEO. E., SURGEON.—Granted leave of absence for one month and fifteen days, with permission to go beyond the limits of the Division. S. O. 79, Military Division of the Pacific, June 25, 1875.

STORROW, S. A., ASSISTANT-SURGEON.—Assigned to duty at Benicia Barracks, California. S. O. 63, Department of California, June 23, 1875.

MATTHEWS, W., ASSISTANT-SURGEON.—Assigned to duty at Alcatraz Island, California. S. O. 63, c. s., Department of California.

HALL, J. D., ASSISTANT-SURGEON.—Relieved from duty in the Department of Dakota, to report to the President of the Army Medical Board, New York City, for examination for promotion, and, at its conclusion, by letter to the Surgeon-General. S. O. 135, A. G. O., July 8, 1875.

The following promotions and appointments in the Army of the U. S., made by the President, are announced.

APPOINTMENTS—MEDICAL DEPARTMENT.

To be Assistant-Surgeon, with the rank of First Lieutenant, to date from June 26, 1875.

BLAIR DABNEY TAYLOR, of New York.

CURTIS ETHELBERT PRICE, of California.

JAMES CHESTON WORTHINGTON, of Maryland.

HENRY STUART TURRILL, of New Mexico.

EDWARD TIFFIN COMEGYS, of Ohio.

WALTER REED, of Virginia.

HENRY SAYLES KILBOURNE, of Indian Territory.

JAMES CUSHING MERRILL, of Massachusetts.

WILLIAM RICHARDSON HALL, of Missouri.

RICHARDS BARNETT, of Mississippi.

GEORGE HENRY TORNEY, of Maryland.

LOUIS WILLIAM CRAMPTON, of Pennsylvania.

JOSEPH YATES PORTER, of Florida.

MARSHALL WILLIAM WOOD, of Illinois.

MARCUS ELVIN TAYLOR, of New York.

WILLIAM LANDS NEWLANDS, of California.

JOHN DE BARTH WALBACH GARDINER, of Maryland.

ROBERT E. SMITH, of Missouri.

WILLIAM CUMMINGS SHANNON, of New Hampshire.

GEORGE EDWIN LORD, of Maine.

LOUIS S. TESSON, of Missouri.

WILLIAM GARDINER SPENCER, of New York.

ROLAND LEE ROSSON, of Virginia.

G. O. 69, A. G. O., July 2, 1875.

PHILADELPHIA MEDICAL TIMES.

SATURDAY, JULY 24, 1875.

ORIGINAL COMMUNICATIONS.

CHLORAL.

BY W. B. ATKINSON, M.D.

THOUGH discovered by Liebig as early as 1832, chloral was not brought into use as a remedial agent until Liebreich introduced it early in 1869. Since that time it has rapidly grown in favor, and at one time appeared in danger of assuming the position of a panacea.

Dr. Squibb says, "It supplies another forcible illustration of the baneful effects of speculation and inflation, and of the dangers which must always attend popularity; and particularly the popularity of potent medical agents. It seems hard to teach the public that nothing can be potent only for good. That to be potent for good involves, in the very nature of all things, an equal potency for harm. Hence the danger of advertising any medical substances which have any potency for popular use, . . . for the chances are always greatly in favor of the substance doing more harm than good, until a panic and prejudice are produced against it, when it may be unjustly condemned and lost."

These remarks of Dr. Squibb forcibly remind us of the fact that when in California, in 1871, we found chloral in almost universal use: persons with no pretence to any medical knowledge were constantly employing it in large doses for the relief of the neuralgic pains to which a large majority of those dwelling on the Pacific coast are subject.

This article derives its name from the first syllables of the two bodies from which it is made,—chlorine and alcohol.

It is prepared by passing for several days *dry* chlorine gas through *absolute* or very strong alcohol, until hydrochloric acid ceases to be produced. On cooling the liquid, a partial solidification takes place, due to the almost unavoidable hydration of the chloral. The mass is now treated with strong sulphuric acid, the oily liquid which separates is distilled over a little lime, and the distillate is combined with the requisite quantity of water, and then allowed to congeal, or else crystallized by fusion and slow refrigeration, or from one of its solvents.

At present, the hydrate of chloral, commonly known as chloral, with the exception of the croton chloral hydrate, which has only very recently been discovered, also by Liebreich, is the only form used: the alcoholate and all other forms having virtually disappeared.

Much of the difference of results obtained by the early uses of this agent we feel confident arose from the vast difference in the purity of the article. Indeed, so great was the diversity of opinion, that one might have concluded with good reason that an entirely different article had been under observation. At present, pharmacists agree that the surest method to procure a pure form is to have it recryst-

allized. In this form it is found in distinct, colorless, transparent crystals, dissolving readily in water, producing a clear solution, and is much less liable to cause that irritating effect so often noticed by those who employ it.

Prof. Jos. P. Remington, to whom we are indebted for valuable suggestions, proposes that this form only should be prescribed, under the name "chloral (recrystallized)."

The limits of an essay like the present forbid the entering more into detail upon the chemistry of chloral; but we shall prepare a bibliography which will prove of service to those who desire to investigate these points more fully. Among the best articles that have appeared is one by Prof. E. R. Squibb, published in the "Transactions of the Amer. Pharm. Assoc." for 1871.

This gentleman, in a private letter, says,—

"Although its popular use has diminished very much, I judge by my own experience that its professional use is still steadily increasing, and its sphere of utility is gradually enlarging. I supply it to about five of the largest insane hospitals in the United States, and have done so for many years, and find the quantity used steadily but slowly increases, whilst its value and utility seem best established where it is most used, because where most used it is best understood. I believe that those who are most timid in regard to it are mistakenly so, and are those who use it least. And those are most timid in regard to it who most frequently misapply it. I think that as a simple, safe, and valuable hypnotic it has a sound, well-deserved, permanent reputation, and fills a place in the *Materia Medica* which was before vacant."

He also says, "In a case of obstinate vigilance, the result of excessive brain-work, in which I am now advising and watching its use in a prominent man, it is doing most admirable service, having broken the habit of inability to sleep. And now, in smaller and smaller doses, it is re-establishing the normal habit of sleep, which is quite as necessary as food is to brain-work."

Because of the fact that chloral is decomposed by the action upon it of alkalies, liberating chloroform, it has been supposed that a similar action takes place in the system, and that its medicinal effects are due to this supposed presence of chloroform in the circulation. Recently, however, this has been denied: and several experimenters have been unable to detect chloroform in the blood of animals or human beings while under the influence of chloral.

As a sleep-producer we have found it invaluable, inducing a most refreshing slumber, from which the patient may readily be aroused, and into which he relapses as though he had not been disturbed. We have, after the experience of its use in a large number of cases, not once observed any unpleasant results; never headache, occasionally a slight nausea, due, we were led to believe, to the impurity of the drug. We have yet to see a case where its use was interdicted by any idiosyncrasy. Of course, our remarks are intended to apply only to its use in proper medicinal doses, as it has never been our

ill fortune to see an instance where it has been administered in excessive or poisonous doses.

The cases reported from time to time, where it has been taken in extreme doses, show that it produces first a deep sleep, gradually followed by coma and death. What would prove, however, a poisonous dose to some seems to have acted medicinally in others, as cases are on record where enormous quantities have been swallowed in a very short time and apparently without any untoward results. When under its full effect, the whole muscular system is relaxed, a result which has been found of great value in many instances. For this reason it has been proposed as a substitute for chloroform, ether, and the other anæsthetics. Upon this point we shall speak subsequently.

In the latter part of 1871 we first employed this agent in a case of acute mania from the use of alcohol. We exhibited it in full doses, say twenty grains, repeated every hour until sleep was procured. Having a careful and reliable nurse, we left the patient after administering the first dose, and on returning, after an interval of a few hours, we found our patient sleeping quietly. He had been suffering at short intervals, prior to the use of the chloral, with terrific convulsions. All trace of these had disappeared. He had taken, we believe, four doses: eighty grains. The change was so marked, and his sleep so profound, that his wife expressed a fear lest he should never awake. Having reassured her, we left, to return next day. In this interval, the nurse was under instructions to repeat the dose if the patient should wake and show signs of a convulsive tendency or of mania. He slept most profoundly all night, anxiously watched by his wife and the nurse. In the morning, as the wife again expressed her fears, we roused him, and had some nourishment administered. He awoke readily, replied clearly to all our questions, and again sank into sleep without a renewal of the dose, and slept in the same way until late in the day. From this time he rapidly recovered.

Our experience in this case emboldened us to its further use. We felt assured that it was *the* remedy for convulsions, and determined to employ it should it be our misfortune to encounter any cases of puerperal eclampsia. Having made this suggestion to a number of our friends soon after, Dr. Wm. F. Patterson called us to see a case where the convulsions had set in soon after delivery, and in which he had already been employing the remedy. Examination of the medicine convinced us that the chloral was of an inferior quality; we immediately administered a double dose, and ordered a new supply from an undoubted source. Our next meeting showed a good result. The convulsions had ceased, and the patient was enjoying a pleasant, refreshing sleep. Convalescence was rapid.

Since then several similar cases have occurred to us, and in every instance has this remedy demonstrated its power for good.

Among those who allude to its value in these cases are Schroeder and Leishman, both of whom speak highly of it.

Mazona regards it as a preventive of eclampsia,

and says it procures a repose strongly favoring the cure of this form of convulsion. He remarks, "Puerperal convulsions, of whatever nature, are calmed by chloral; it never aggravates the paroxysms, but the patients are always found better after its administration. In eclampsia it is necessary to keep the patient under its influence sufficiently long. It should be repeated on the slightest sign of a return of the paroxysms."

Although a few writers have failed to obtain good results, yet, as each is limited in his experience to a single case, we cannot allow this to weigh against the host of instances reported where it has proved its value and saved the life of the patient.

Obtain a pure article, administer it in full and frequently-repeated doses until the convulsive tendency is subdued; then act according to circumstances.

In some cases we have procured a cessation of the convulsion by the anæsthetic effects of ether or chloroform, and immediately administered a full dose of chloral. When it is found impossible to cause the patient to swallow, the remedy may be administered by the rectum, in the form of an enema. Of course, the dose should be increased, say forty to sixty grains at first, the effect carefully watched, and the enema repeated, or the remedy given by the mouth, if this becomes practicable, as may be demanded by the exigencies of the case.

In these and similar cases it has been used in the form of a subcutaneous injection, or of an intravenous injection, as proposed by Prof. Ore.

In this connection we might allude to the report of this gentleman to the Academy of Sciences of Paris, of several cases in which he has succeeded in producing anæsthesia by this plan. In one diseased bone was removed from the tibia, and in the other ovariectomy was performed. He adds a few drops of a solution of carbonate of sodium to a mixture of one part chloral and four parts pure water. Dr. Lande followed this plan with a fatal result.

As it can best be administered in solution, it becomes important to disguise its burning, acrid taste. We have invariably ordered the syrup of orange-peel for this purpose, and believe this, when rather concentrated, will prove the most effectual means of covering the taste.

Capsules have been proposed, but these would positively be objectionable, by liberating at their point of solution the agent in a concentrated form, which would be sure to give rise to extremely unpleasant if not dangerous results.

The range of diseases for which this remedy might be employed with advantage would naturally suggest itself after the above description of its properties.

Especially in parturition has it proved of immense value. In our "Hints in the Obstetric Procedure," we have already assigned to it its proper position. In lingering labor, we have been greatly pleased with its action. All who have employed it agree in saying that its effects are most happy. Perhaps we cannot do better than quote from Prof. Carl Schroeder. He says, "Chloral appears to act in a manner similar to opium. Gerson da Cunha

has given it in tardy and exhausting labors; after a few hours' sleep, on awakening, the labor was very rapidly terminated by powerful pains. We have also observed that by the use of chloral in cases where the uterine action was very painful without being effective, the labor assumed an instantaneously rapid course, although the intervals between the pains had considerably increased in duration."

Further, he says, alluding to its anæsthetic properties, "It appears that chloral has until now been used only in a limited number of normal labors. Lambert recommends it strongly, but he prefers it in small doses of fifteen grains every quarter of an hour to a larger dose given at once. It by no means interferes with the contractions of the uterus, but rather favors them."

Schroeder says, "We can bear testimony to this from our own experience. For even if by its use the interval between the pains becomes somewhat lengthened, the pains themselves increase in efficiency."

In these views of Schroeder and others we fully concur, having constantly had recourse to it, both in our own practice and in consultation. In every instance have we had reason to be satisfied with its results. The detail of one case will serve as a type of all.

Mrs. G., in labor with her twelfth child, was found in much anxiety, because of the fact that all her labors had been tedious, painful, and exhausting. The os was rigid, the pains powerful, and everything betokened a tedious time. We gave her a dose of fifteen grains, to be repeated hourly, if the pains remained the same. She took two doses, had a refreshing sleep of three or four hours, was aroused by full labor-pains, speedily terminated by a natural delivery. She remarked that she had never experienced so easy a labor. All who have employed it at our suggestion bear the same testimony as to the results obtained. In this connection, we find the views of Mazona so fully expressive of these effects that we must be excused a quotation. He says, "With females in labor, chloral brings first calm, then sleep. It considerably diminishes the pains. The uterine contractions continue during the chloralic sleep. They are shorter, less frequent, but more powerful. In general the length of the labor is shortened by the chloral. It places the patient in a semi-conscious condition; yet it may be so complete that she may be entirely unconscious, even at the moment of delivery. This anæsthesia is prolonged after the delivery, for a time. Given in small doses, it produces agitation, which ceases when the full dose has been administered. It may be administered at any time during labor."

We have frequently had occasion to observe its value in cases where, near the close of pregnancy, the patient would be attacked with pains simulating those of labor. A vaginal examination would reveal an undilated os, and an entire absence of the accompaniments of real labor. Here the exhibition of one or two full doses of chloral will send the patient into a profound, refreshing slumber, from which she awakes with renewed life, and may often

continue comfortably in the performance of her usual household duties for several days. We have invariably observed that when our patient fell into labor after such treatment, her progress to delivery was rapid and pleasant.

As might have been anticipated, this remedy has been largely used in puerperal mania, and with the most excellent effects. Combined with the bromides, it speedily controls the acute symptoms, and in the few cases which we have encountered recovery was rapid and permanent. Prof. Fordyce Barker has found it of immense value. He says, "It apparently does not interfere in the slightest degree with any of the organic functions; it is not followed by any unpleasant secondary effects, as opium often, and bromide of potassium sometimes is; and in mania I have never yet seen it fail to induce sleep."

Prof. Barker thus compares it with chloroform: "Whatever chemists may tell us, I am certain that the effects of chloroform and chloral-hydrate differ in many essential particulars. Chloroform induces a very profound sleep, but this is of short duration. If the patient be awakened, she does not fall asleep again without a renewal of its administration. The sleep from chloral-hydrate is prolonged often for hours, and if awakened while under its influence, the patient at once falls asleep again. After the sleep of chloroform there is frequently cerebral disturbance for a few moments after waking, as there is also just before the subject comes under its influence. The sleep from chloral is neither preceded nor followed by symptoms of cerebral excitement. Chloroform is of immense value in preventing and controlling convulsions, but is of no service in producing sleep and allaying excitement in the maniacal. The chloral has very little, if any, influence in preventing or controlling convulsions (which we deny, gentlemen, from our own experience), but is by far the best agent known for inducing sleep in puerperal mania. I usually prescribe it in fifteen- or twenty-grain doses, well diluted, to be repeated every two hours until the effect is produced. I have given it in thirty- or forty-grain doses, but I have now settled on the smaller quantity, as being safer and just as efficacious, if repeated until the desired influence is obtained."

Leishman observes, "Chloral is another remedy which has of late, to some extent, superseded opium in the treatment of insanity, as in many other diseases; and experience seems to show that in this drug we have a most important addition to the *matéria medica* of the class of diseases in question."

In other forms of mania, especially in delirium tremens, has it proved potency for good. The case alluded to in the opening of this paper is a fair type of the results to be expected from its employment. In full doses, at short intervals, until sleep is procured, it is vastly preferable to opium or any of its preparations.

For the morbid vigilance of mania, we believe all alienists agree as to its value.

In general practice, we find it extolled in bronchial affections, for allaying cough and procuring rest for

the diseased organs; in a number of such cases our own experience has been very happy. Watson regards it as often preferable to opium, which sometimes acts in a dangerous manner. In asthma, it relieves the spasmodic trouble, though we have not observed that it gave any immunity to a fresh attack. In pertussis, in quite small but frequently-repeated doses, it generally shortens the attack, and anyhow makes the disease less exhausting to the little sufferer.

Weidman, of Jena, reports a case of chorea completely and readily cured by this agent alone.

In epilepsy, its administration has acted to relieve the force of an attack, but does not seem to prevent a return. As yet, however, the number of cases reported are so few that we are unable to deduce any positive inference on this point.

In tetanus, Verneuil, Dufour, Denton, and others have successfully administered chloral, and we find fresh cases are constantly reported where it has acted favorably. Anstie says of it in spinal irritation, "in moderate doses it is probably the best and safest remedy, and with care not to give too much, we may go on using the same dose without increase for a good many times."

Nor are we restricted to its use internally, for we find it to possess valuable properties as an external application. Combined with an equal part of camphor, by prolonged trituration it forms a thick oily fluid, to which six or eight parts of glycerin or simple ointment may be added. This makes an excellent application for the relief of pain, irritation, and itching; particularly is it useful in cutaneous troubles.

Dr. L. D. Bulkley recommends this application very highly in the "Transac. Amer. Med. Assoc. for 1874," under the name of "A New Antipruritic Remedy."

Of course it is necessary to see that the skin is not broken, else this application will produce, as in our own experience, the most intense burning pain, which may result in a high form of inflammation.

As an external wash, Martineau suggests a solution of one part to a hundred of water for bed-sores. He bathes the part, and covers it with lint saturated in the solution. He says, "Its action is remarkable. The sore which was indolent takes on a new appearance, healthy points appear, it suppurates less and heals rapidly." He treats suppurating cysts with injections of chloral water, and when the pus is fetid, he adds the eucalyptus. Dujardin-Beaumetz also announces good results from this same mode of application.

From this view we might anticipate its use as an antiseptic, and we find several writers proposing this. Perhaps the best paper on this application of chloral is that by Dr. W. W. Keen, in the *Medical Times*, March 21, 1874.

For the purposes of dissection he found that its cost would preclude its general use; but it is preferable for delicate dissections, as it preserves the color and the natural consistence better than other articles; enables subsequent injections into the arteries to be made with better effect, and does not prove so destructive to instruments.

For pathological purposes it is cheaper, and at the same time renders the preparations more accessible, than when preserved in alcohol.

In surgery, he found it a most thorough deodorant, and a stimulant of indolent ulcers into healthy granulating sores. If too strong, it becomes a powerful irritant; the best proportion is two to ten grains to the ounce. The odor, if found objectionable, may perhaps be entirely overcome by the addition of an essential oil.

When applied to the mouth or nostrils, as in ozæna, the solution must be very weak. The best plan is to commence with a small quantity, say one-quarter of a grain to the ounce, and increase as may be found necessary. In no case should it be repeated when its use is followed by great irritation.

In our clinics at the Howard Hospital, we have used it in a large number of cases of leucorrhœa, etc., and in nearly every instance with great benefit. Several writers report cases of gonorrhœa rapidly cured by injections of such a solution, increased in strength until it produced slight smarting.

Time will not permit our dwelling at more length upon the uses of this agent, but enough has been given to show the range of symptoms it is best able to combat.

We desire, in conclusion, to refer to some of its contra-indications, and to the effects produced by a too long continuance in its use. This is always to be deprecated. In one instance, to relieve intense hyperæsthesia, where every other remedy had failed, it was ordered, and, in desperation, the lady repeated the dose at extremely short intervals, occasionally increasing the quantity. While it effectually allayed the extreme sensitiveness, it produced a species of mania, lasting for about twenty-four hours, and she still complains that it has affected her memory. In this case, we did not observe the rubeolous eruption said to be caused by its long use or in poisonous doses.

Manning has seen it to cause a hyperæmia of the skin, and an erythema over the face and chest, which Brown-Séquard attributes to a temporary paralysis of the vaso-motors of the head and neck. If continued, it will extend to a paralysis of the extremities. He relates two cases of mania with very intractable insomnia, in which he gave five grains twice a day to one, and double that to the other, followed by thirty to forty grains at night. After seven or eight weeks of this treatment, the patients had become so feeble as to be unable to walk, or to put one foot before the other. This rapidly disappeared when the chloral was discontinued.

Gubler speaks of its effects as chloralism, which he divides into acute and chronic. The slight form of the acute is characterized by vomiting, vertigo, hebetude, loss of force, and various eruptions. The grave form is followed by pallor, troubled vision, cold sweats, feeble pulse, stupor, coma, tetanic convulsions, and death. Chronic chloralism exhibits symptoms similar to ergotism, as hyperæsthesia, general uneasiness, epidermic desquamation of the fingers, superficial ulcerations around the nails, anasarca, albuminuria, feebleness of the heart, embarrassed circulation. These often terminate in death.

From the experience thus far obtained, it would appear that in certain individuals this remedy is contra-indicated by the existence of an idiosyncrasy in certain cases, and by general feebleness of constitution. Its use has been frequently objected to in cases of great irritability of the stomach. In our own experience we have never regarded this. In a case of intussusception, the physician had failed to give relief by any of the remedies employed. In consultation, we suggested chloral in free solution, repeated at short intervals. Our next meeting found the vomiting entirely checked, the pain relieved; in short, the patient rapidly convalesced from that hour.

As an antidote to the poisonous effects of this remedy, strychnia has been proposed. M. Ore has experimented upon these remedies, and arrives at the conclusion that this view is erroneous. On the contrary, Dr. L. Turnbull, who has experimented also, recommends, in cases of impending death from this agent, the system should be supported by heat, food, and artificial respiration, with stimulation and small doses of strychnia.

In this connection we cannot refrain from giving his conclusions, as drawn from experiment and observation. There are three degrees of the operation of chloral: first, feebly soporific, with slightly nervous sedative action; second, deeply soporific, with diminution of sensibility; third, complete anæsthesia, loss of general sensibility and muscular power,—catalepsy. Death takes place last at the heart, which remains in action long after the death of the other organs. The heat is reduced one or two degrees when under its influence. In affections of the eye, it is apt to cause swelling, redness, excessive lachrymal flow.

This lowering of the temperature has caused several writers to suggest its employment in the pyrexias, as variola, scarlatina, etc., where the temperature is above the normal rate. Of course, much will depend upon a more careful investigation of this point before a positive decision can be made.

In conclusion, gentlemen, while thanking you for your patient attention to my paper, the limits of which I fear have far exceeded the bounds of propriety, let me say that I shall feel fully repaid for any effort it may have cost me if I can impress upon you the inestimable value of chloral as an aid in the obstetric art.

EXCRETION OF ALCOHOL THROUGH THE RESPIRATORY TRACT (Schmidt: *Centralblatt für Chirurgie*, No. 23, 1875).—Heubach has recently confirmed the previous opinion that in febrile affections none, or but little, of the alcohol which is administered re-appears in the urine, and Schmidt has, in pursuance of similar investigations, sought to find the amount of spirit of wine contained in expired air.

The alcohol was always given four or five hours after the last meal, and during the time of the experiment the nose was closed by means of a clamp.

These experiments were carried out on ten patients, and to each of them at least fifty cubic centimetres were administered; but in no case could evidence be obtained of more than a trace of alcohol in the expired air.

W. A.

TRANSLATIONS.

PERIODIC MELANCHOLIA (Nestel: *Centralblatt für Chirurgie*, 1875, No. 22).—Dr. Nestel calls attention to a variety of melancholia which has not as yet been fully described, and which he thinks presents some characteristics the study of which may throw some light both upon the genesis and the treatment of the affection. A banker, aged 48 years, whose mother had melancholia sine delirio, has suffered since 1851 with attacks of melancholia of a periodical character which last from four to eleven months and are followed by periods of two to five months of comparative health. These attacks appear to occur entirely without cause, and are at first made manifest by irritability of temper, etc., which is followed after the lapse of a few days by the development of the most intense and painful depression.

The patient, who is a very intelligent man, complains of loss of energy, apathy, and anxiety, and is incapable of any exertion. These complaints are made, however, only when inquiries are made as to his condition, for if not disturbed his relation with the outer world is entirely passive.

In conjunction with this mental state, the appetite is impaired, constipation is present, there is restlessness during the unrefreshing sleep, and the patient becomes weaker and loses flesh. Finally, the symptoms become almost unbearable; sleep is almost impossible, and the gravest consequences seem imminent, when suddenly the attack passes off, and a state of normal health supervenes, which continues for some months until the next attack of the disorder.

Owing to the number of attacks which came under observation, the following facts relative to them were established:

1. There was always a loss of weight during the attack, which was made up as soon as a return to health took place.

2. Each attack began with a subacute anæmia; the skin and mucous membranes were pale, the pulse small, slow, and contracted, and the veins dilated.

3. There were also present during the attacks many evidences of perverted nutrition,—boils, eruptions and itching of the skin, falling of the hair, etc.

4. At the climax of the attack, all the secretions were markedly diminished, and evidences of derangement of the vaso-motor system were noticed.

From all this the inference seems allowable that there was an anæmic state of the brain, or, perhaps, of only certain parts of it, with which the other symptoms can be brought into accordance.

W. A.

FUNCTION OF THE THALAMI OPTICI (H. Nothnagel: *Centralblatt für Chirurgie*, No. 23, 1875).—After destruction of the thalami optici in rabbits, the animals stray about, still preserving the power of voluntary motion, neither paralysis nor anæsthesia being noticed, there being at most some loss of flesh after the expiration of some weeks. When, however, there was actually a total destruction of these organs, this result was abnormal, since the animal then allowed the fore-legs to remain in anomalous positions when thus placed. When the injury to the brain had been unilateral, this phenomenon was noticed only on the extremity of the opposite side of the body. Destruction of the thalami, as a rule, added nothing to the symptoms observed when some of the adjacent parts had been injured, but in some cases when the injury had been but partial in its character, in addition to a bending of the vertebral column and nystagmus, the head was held towards one side.

From these observations it is fair to conclude that neither the routes via which impulses to voluntary

motion are transmitted, nor those which transmit sensation, pass through the thalami optici. The only positive disturbance which manifests itself after removal of these parts of the brain is a failure, under certain conditions, to retain the extremities in their proper position. Motor phenomena also occur in the thalami, which are excited by peripheral sensory impression.

Nothnagel then agrees with Maynert in regarding the thalami as the organs by which co-ordinated motions which are reflex in character and follow peripheral impressions are made possible. These in their turn pass from the thalami to the exterior of the front and sides of the cerebrum, become fixed in the ganglion-cells of these parts, are remembered, and serve in their turn as impulses to conscious action. W. A.

INTRACELLULAR DEVELOPMENT OF BLOOD-CORPUSCLES IN MAMMALIA (*Centralblatt für Med. Wissens.*, No. 22; from *Proc. of Royal Soc.*, 1874, E. A. Shaefer).—The subcutaneous connective tissue of the new-born rat consists principally of a hyaline substance which is nearly homogeneous, and in which but few fibres, together with a considerable number of unusually delicate flattened cells, are present. The protoplasm of these last-mentioned bodies contains very numerous small, bright bodies, which probably contain a watery fluid, since they have less refractive power than the hyaline substances.

These frequently conceal the nuclei which are almost always present in the contents of the cell. From these cells the blood-vessels of the tissues and their contents, the red, and probably also white, corpuscles originate. Before the development of these intra-protoplasmic bodies to red blood-corpuscles has been completed, the cells containing them grow in length, and the hæmoglobin finally lies in a cavity. The cell resembles a section of a capillary tube, but with pointed and closed extremities. It has a drawn-out, spindle shape, and consists of a hyaline wall, in which the nucleus is imbedded, and contains blood-corpuscles and a fluid that is blood.

Two or more cells of this kind unite at their ends, and, a communication having been thus established between them, by a similar process a union is formed with capillaries which already exist, and in which the blood is already in circulation. It is worthy of remark that this junction of these spindle-shaped cells is not effected by a direct juxtaposition of their respective extremities, but the end of one overlies that of the other, and then the communication is caused by the absorption of parts of their walls. W. A.

THE USE OF THE LARYNGOSCOPE AMONG CHILDREN (*Centralblatt für Med. Wissens.*, No. 25, 1875; from *Jahrb. f. Kinderk.*, T. viii., Klemm).—The laryngoscope can readily be used in the examination of the throats of children of three or four years of age, and local applications can also be made without disturbing the youthful patients. Among these remedies the use of solutions more dilute than when intended for adults, applied with smaller pencils, is advised in preference to that of powders applied by currents of air. With the exception of croup and diphtheria, diseases of the throat and larynx are of much more rare occurrence among children than among adults, and many affections which are common among them are unknown among the young. Among such may be mentioned chronic catarrh of the pharynx and larynx, and also syphilitic and tuberculous ulcerative processes, as of much less frequent occurrence in extreme youth than in adult life.

Klemm never saw primary laryngeal phthisis in a child, and concludes either that youth is in itself a protection against this affection, or that the exciting causes which play their part among adults are here wanting.

Reliable observations relative to the frequency of paralysis in childhood are wanting, but disturbances of sensation seem to be entirely absent. In the same connection Klemm remarks that he has treated hypertrophied tonsils in children, with good results, by boring into them with crayons of nitrate of silver. W. A.

TWO CASES OF CHOREA WITH FATAL TERMINATION (*Centralblatt für Med. Wissens.*, No. 25, 1875; from *Gaz. des Hôp.*, 1874, De Beauvais).—The two patients were both girls, aged 14 years, but, on account of the pathological conditions found, the second case seems to be more worthy of detailed report. The girl's development had been good, and nothing abnormal about her was noticed, except some twitching of the facial muscles during her second year. The first menstrual epoch passed without any disturbance, but during the second the patient fell into deep sleep, and, after having been awakened, symptoms of chorea of the most marked character came on, which steadily increased in severity until death occurred.

The brain appeared to be increased in volume, its membranes red, and in the great longitudinal fissure they were somewhat thickened and could not be readily separated from the cerebral substance. The convolutions lay close to one another, and were of a rosy color. The gray substance appeared to be reddened, and the vessels of the pia mater and of the white substance were too full of blood, while in the ventricles was found a serous fluid which was mingled with blood. The cerebellum was also hyperæmic, and on its under surface the gray substance was found to be somewhat softened. The membranes of the cord were also found to be very rich in blood, and the substance of the cord very soft and yellowish white in color, and confluent at the level of the upper dorsal vertebra. The lungs, heart, kidneys, liver, spleen, intestines, and stomach were healthy. W. A.

ACTION OF ACONITE ON THE HEART (L. Lewin: *Centralblatt für Med. Wissens.*, No. 25, 1875).—The conclusions reached by this experimenter are as follows:

1. The anomalies in the heart's action which occur in poisoning with aconite do not have their origin in an affection of the medulla oblongata.
2. The observed results, which are apparently contradictory, can be separated into two groups, both of which include a lesion of the nervous centres in the ganglia of the heart, and are distinguished by there being in one class an integrity of the pneumogastric nerves which does not exist in the other.
3. The integrity of paralysis of the vagi depends upon whether its intracardial terminations have been merely irritated for some time or actually paralyzed.
4. This variation is entirely individual in character, and does not depend upon the poison.
5. The rhythm of the pulse which has been frequently observed is to be explained by the unequal and irregular action of the aconite on one or other of the cardiac centres, and this may be due to an unequal distribution of the poison in the blood. W. A.

SALICYLIC ACID IN CATARRH OF THE URINARY ORGANS.—Dr. Paul Fürbringer gives an account, in the *Berliner Klin. Wochens.*, 1875, No. 19, of four cases in which salicylic acid was used internally to combat alkaline fermentation of the urine.

The first case was that of a phthisical and paralyzed young man, whose urine was alkaline, fetid, threw down a voluminous precipitate of triple phosphate, urate of ammonium, and pus-corpuscles, and contained an innumerable number of bacteria. He was ordered fifteen grains of the acid in a mucilaginous potion daily, and after three days the urine showed an acid reaction with much less odor. The use of the acid

for a longer period removed all the sediment, but the death of the patient put an end to the observations. The second and fourth observations were in general much the same; but the third case, that of a man who had suffered for years from chronic cystitis, was treated by local injections or rather by washing out the bladder with a one-fifth per cent. aqueous solution of salicylic acid by means of a double catheter, the internal use of the acid being simultaneously continued. The improvement in all these cases, as indicated in the change from alkaline to acid reaction, in clearing up of the sediment, and in diminution and death of the bacteria previously found in the urine, points to this remedy as efficient in such affections as bring about alkaliescence of this fluid. Dr. F.'s conclusions are as follows:

1. Salicylic acid administered internally in relatively small doses prevents alkaline fermentation in the urine.

2. It does not, however, prevent the secretion of pus in the urinary passages. X.

MOVABLE KIDNEY.—Dr. Fourrier communicates to the *Bull. Gén. de Thérap.*, June 15, the notes of six cases of this affection, accompanied by remarks.

The patients were all females, the first three having passed the epoch of the menopause, the last three still menstruating. In each case the right kidney was the one affected. The symptoms in the first series were colic in the region of the kidney,—transient, and occurring at irregular intervals; in two of the cases nephritis, and in all three a tumor painful to pressure, presenting the form of the kidney, and situated or extending into the right iliac fossa.

In the second series of cases the physical signs were similar, and the symptoms very much the same, excepting that the attacks were coincident with the menstrual epoch, the patient being quite free from suffering in the interval, and in one case the trouble disappearing entirely after the cessation of menstruation. In one case a peculiar oily film which covered the urine after standing was noticed.

Dr. F.'s cases were all more or less relieved as to the painful symptoms, by tonic or other treatment. He recommends perfect rest during the menstrual period when this seems to predispose to the attacks, with attention to the digestive functions and the nervous conditions apt to accompany the affection. Finally, a supporting bandage should be used; occasional frictions with iodine may be of use, and care should be taken by the patient to avoid sudden shocks, as in stepping down or jumping. Any anæmia which may be present should also be combated. X.

OPERATIVE PROCEDURES IN RETENTION OF URINE FOLLOWING CONTUSION OF THE PERINEUM.—During a debate on this subject at a recent meeting of the Société de Chirurgie, M. Notta asked if the surgeon, when called to a case of this kind, should make a supra-pubic puncture to evacuate the urine, or should seek to evacuate the bladder by the ordinary route. In three cases coming under his care he had followed the latter method, making an incision into the urethra on the median line of the perineum, and, introducing a fine whalebone bougie into the open ends of the urethra, had used this as a guide to the catheter. The wound in each case cicatrized nicely, and nothing remained but a slight narrowing of the urethra, which it was easy to remedy later. M. Guyon remarked that his custom was to cut directly down upon the urethra without making any previous attempt at catheterization. External urethrotomy in cases of stricture certainly presents difficulties; but in cases like those under discussion, when the urethra preserves the normal direction, it is easy to cut down upon it. M. Le Fort made a distinction between those cases in which effusion of blood alone took place, and those in which extravasation of urine also resulted from tearing of

the urethral walls. In the former variety simple puncture of the bladder was often sufficient, and the urethra subsequently regained its patulous condition.—*Bull. Gén. de Thérap.*, June 15. X.

OXYGEN AS AN ANTIDOTE TO PHOSPHORUS (*Centralblatt für Chirurgie*, No. 23, 1875).—The question arose at a recent sitting of the Académie Royale de Médecine of Brussels, whether or not the antidotal effect of the crude oil of turpentine against phosphorus might not be due to contained oxygen. (It should be said that the rectified oil is valueless.) In order to settle this point, MM. Thiernes and Casse undertook a series of experiments upon dogs who had been poisoned with large doses of phosphorus. Defibrinated and arterial blood was injected, and direct intravenous infusion of oxygen gas was also practised. The former means failed entirely to give relief, and these observers then turned their attention entirely to the trial of oxygen infusions. The operation is not without risk, but, as these cases are desperate, it is justifiable. Injections were made into the external saphena vein by means of an apparatus especially devised for the purpose. The results obtained on the whole were highly satisfactory, and lead to the belief that oxygen is the essential antidotal constituent of the crude oil of terebinthine. X.

CURE OF MALIGNANT PUSTULE BY CARBOLIC ACID.—The various means of treatment which have been used in *puistule maligne* may be divided into two classes: those intended to destroy as promptly as possible the charbon virus at the point where it has been inoculated, and those aimed at the prevention of the general effects of the poison. In order to destroy the virus locally, caustics of every kind have been used; while to fulfil the second indication tonics, stimulants, diaphoretics, and sometimes evacuates have been employed. Dr. Estradere has employed carbolic acid both internally and externally with the greatest success in six cases, which are published in the *Bull. Gén. de Thérap.* for June 15.

TREATMENT OF ALOPECIA BY ELECTRICITY.—Dr. Waldenstrom has attempted to remedy the loss of hair from the scalp by this means. He applied in one case one of the poles to the superior ganglion of the great sympathetic, and the other upon that portion of the scalp from which the hair had fallen. At the end of six weeks the hair was replaced. Another patient treated in the same manner showed a not less favorable result at the end of two months of electrization. In spite of this double success, Dr. W. does not feel authorized to extol the remedy without further trial. He only states his belief that the treatment is a promising one, and hopes it may have a thorough examination. X.

A NEW METHOD OF ADMINISTERING ENEMATA OF CHLORAL.—M. Dujardin-Beaumetz has employed the process suggested by Griffith for administering chloral enemata, with success. A solution containing a drachm of chloral is beaten up with the yolk of an egg, and this is added to a glass of milk to form the enema. This mixture has the advantage of causing no pain, which is not the case when doses of thirty to sixty grains of chloral are administered in the usual enema or suppository.—*Bull. Gén. de Thérap.*, June 15. X.

SOLUBILITY OF SALICYLIC ACID (J. Müller: *Berlin. Klin. Wochens.*, 1875, No. 19).—Salicylic acid is soluble in three hundred parts of water, in four parts of alcohol, in fifty parts of hot oil, and in the same proportion of hot glycerin, without precipitation on cooling. Glycerin aids its solution in water, so that this will take up one part to three hundred, provided the acid is first dissolved in twenty parts of hot glycerin, and this mixed with eighty parts of water.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

CIRCULAR No. 8.

WE have recently seen it stated that in the Western towns india-rubber pavements are highly esteemed on account of their extensibility,—a mass meeting of the oxen of the place being held every spring, and the pavements drawn out a few yards or rods according as the town has grown less or more. The word “circular” appears to suffer the same violence as the india-rubber pavement. Johnson shakes his huge head at the use of it as a noun, standing out for a “circular letter;” Webster, more in unison with the modern spirit, grants the employment of the single word as an abbreviation of a “circular letter or paper;” but now the power of the United States Government is invoked, and the unfortunate noun, pulled and dragged out of all shape, reluctantly and brokenly encompasses a huge quarto of nearly seven hundred pages. It is marvellous, but we wish the strength of this great republic were bent to some better task than that of spoiling the King’s English.

Circular No. 8 is indeed a lusty volume, full of much sound sense, and evidently born of much labor. Just here, if our readers will pardon us, we would like to ask a question. Why is it that, dubbed *soldier*, the average Anglo-Saxon American willingly bestows upon the government for a mere pittance an amount of intelligent work and sterling integrity which in civil life would bring a rich reward,—ay, and does not even begrudge life itself,—whilst the same Anglo-Saxon, yecept *politician*,

spends his nights and days in endeavoring to discover how much he can get out of the same government with the least possible labor?

To return to Circular No. 8. It is a report upon the hygiene of the U.S. Army; a reply to a general order issued from Washington last year, in which the medical staff of the army was requested to furnish reports upon the special hygiene of the various posts, and the general hygiene of the service,—barracks, hospitals, rations, clothing, personal cleanliness, military punishments, and other matters being pointed out for detailed discussion.

The book opens with a very able introduction of the whole subject by Dr. Billings, in which are said many things, both new and old, of interest to all interested even in civil hygiene; especially is this true of that part of the introduction in which the subject of hospital construction is discussed and the plan of a model military hospital given. We would most highly commend the detailed researches of Assistant-Surgeon Charles Smart upon the constitution of the air in the buildings at Fort Bridger.

Different companies of the same regiment were quartered in buildings closely associated, but very diverse in the quality of their contained air, as was shown by repeated chemical examinations. Composed of as nearly as possible precisely similar men, under the same medical care, eating of the same food, exposed to the same weather, and doing the same work, one company had twice as large a proportion of sick as the other, seemingly entirely because of differences in the ventilation of their quarters.

The main portion of the “circular” is taken up with the reports of the medical officers of the various posts, supplemented by elaborate meteorological tables extending over four years, compiled at Washington, under the superintendence of Dr. Woodward. The information here given is of the most detailed character, and embraces everything affecting the health of the soldier. Of course this is of the utmost value to the military service of the country; but the book is scarcely less valuable to the civil profession.

As the report enters into the consideration of the climatology of the posts, the effects of high elevations upon disease, the endemic diseases and general medical geography of the neighborhoods, and as the posts extend over the whole country, from the extreme southern point of Florida to the ice-bound coasts of Alaska, it is evident that the volume is a grand foundation for a proper study of the medical geography of the United States, and renders it possible to answer at an early day many of the various

questions which grow out of the relations of localities to disease. Especially is this the case because of the unbiassed condition of the observers. The judgment of a physician of Colorado or of Florida, of the proprietor of some Virginia sulphur spring, or of the possessor of a free pass upon the Atlantic City Railroad, bears with it the odor of prospective fees; but the average army-surgeon is a nomad; the whole country is his home, and his bread is like that of the righteous,—sure, though it be not overmuch in quantity.

In conclusion, as a motion to adjourn is always in order, so it seems to us is every opportunity fitting to urge upon Congress to do justice to that staff, which, whether viewed by the fruits of its labor or by the culture of its members, is second to none. The present volume is an eloquent though dumb protest against longer ignoring the claims of our confrères of the army. Is not he who preserves the life of one of our own army of as much value as he who takes the life of an enemy? Rifled cannon are good in their way, but hygiene is no less important. The destroyers and the saviors, let them walk hand in hand.

MEDICAL PRESS AND CIRCULAR.—This highly respectable Irish journal has been frequently accused of being in its general management hostile to the United States; but we have never perceived any evidences of such unfriendliness. It is ridiculous to be over-sensitive to criticism; and undoubtedly the American profession, although open to criticism, can well afford to learn its defects as seen with foreign eyes. Our Irish contemporary now, however, certainly owes to its own dignity as well as to its Irish readers a thorough retraction of the ludicrous lies with which its American correspondent has recently occupied its columns. So far as America is concerned, it makes little difference whether these statements are or are not allowed to stand, since here the journal will only be laughed at; but with regard to Ireland it is different, for there the statements may be believed. The truthfulness of "our American correspondent" is shown in the following extracts:

"Thousands, yes, millions of infants are yearly murdered by criminal abortion by these men. This shows forth most glaringly the shocking and awful depravity of American women, and men too. You are probably already aware that the Americans tolerate only one or two children at most. As soon as a wife discovers she is pregnant, she either goes to the abortionist or sends for him, and without any more ado commits the abortion. Among this large and motley

crowd of 'dark and evil ways' must be classed *most* of the 'female doctors.' These are terrible-looking creatures,—veritable witches, if such beings exist at all on this earth,—and who do a thriving trade in abortion."

We have only one word further to say to these statements; it is simply this: any respectable journal which has inadvertently allowed them to be made in its columns has only one course left consistent with the maintenance of its respectability,—to retract them, and to discharge its correspondent as a man utterly unworthy of confidence.

THE Evansville Academy of Medicine seems desirous of enforcing ethics *vi et armis*. It has passed a by-law that whenever a member's name appears in the daily press in connection with an operation, the member shall publicly deny that the statement was made with his consent; or, in the event of his failure to do this, charges are to be preferred against him by the censors.

LEADING ARTICLES.

HÆMOGLOBIN IN THE URINE WITHOUT ALBUMINURIA—ITS DETECTION BY THE GUAIAECUM TEST.

IT is commonly thought that the presence in the urine of the coloring-matters of the blood is invariably attended by albumen, and such is indeed the case when the hæmoglobin is sufficiently abundant to impart a hue to the urine, or be detected by the more ordinary tests, including the microscope. But in an admirable article on "The Etiology of Bright's Disease and the Pre-albuminuric Stage," by Mr. Fred. A. Mahomed, published in vol. lvii. (1874) of the *Medico-Chirurgical Transactions*, it is shown that hæmoglobin may almost invariably be demonstrated by the guaiacum test in acute Bright's disease before albumen makes its appearance. This condition is accompanied, and apparently caused, by a high degree of tension in the arterial system, as shown by sphygmographic tracings.

Mr. Mahomed's method of procedure is as follows: One end of a small slip of white blotting-paper is dipped into the urine and dried over the flame of a spirit-lamp. By this means the dilute solution of the crystalloid is concentrated by evaporation. Two drops of the tincture of guaiacum are then dropped on the paper, and, after a minute or two allowed for evaporation, a single drop of ozonic ether is let fall in the centre of the guaiacum stain. Some time, perhaps a quarter of an hour, will elapse before the blue becomes visible, especially if the reaction is slight. And when it appears it is not permanent, but will begin to fade in a few hours, and will have disappeared in a day or two.

Care must be taken that the urine is not contaminated with saliva, nasal mucus, or iodine, as is the case when a patient is taking a salt of iodine. The guaiacum and ether must be fresh, and Mr. M. suggests that they and the blotting-paper should be tested to guard against any contamination that might give rise to a fallacious result, this being the case with some blotting-papers. With these precautions observed, however, the test becomes most easy of application, the physician having only to carry a few slips of the clean blotting-paper, one end of which he dips into the urine and dries, while on the other he can record the name of the patient.

The reaction is said to be even more brilliant when the guaiacum is applied directly to the urine in the following manner. A drop or two of urine is placed in a small test-tube, to which is added *one* drop of the tincture of guaiacum and a few drops of ether; the two are agitated, and the ether then allowed to collect at the top, forming an upper layer, into which, if *hæmoglobin is present, the blue color is carried*, leaving the urine colorless below.

The practical application of this test, although limited, is of the greatest importance. The reaction can be obtained only in the earliest stage of acute or chronic Bright's disease, usually before albumen appears or when it is present only in the most minute quantity. It occurs in chronic albuminuria only when blood is present in the urine, and, when this occurs, the guaiacum test gives by far the earliest indication of its presence. The reaction fades when albumen becomes copious, and appears again as it diminishes or after it has disappeared. By watching the urine by this test in a case of scarlatina, an attack of acute Bright's disease may be averted by a prompt action upon the bowels, a wet pack, or a cupping over the kidney, or all combined.

PROFESSOR TRAUBE.

"THE world-renowned Professor Traube, Privy Counsellor, died at Berlin on the 24th ult., in the 57th year of his age, after a brief illness."—*Allg. Wien. Med. Zeit.*, June 8, 1875.

Traube was born in Ratibor, Upper Silesia, in 1818. After graduating at the university of his native town, in 1835, he entered upon the study of medicine, completing his course at the University of Berlin in 1840, having occupied one year less in winning his diploma than the six years which he so earnestly advocated as the shortest allowable period of medical study prior to graduation.

The reception of his degree opened the way to broader studies. During his entire professional career Traube was an enthusiastic student, unflagging in intellectual energy. Medicine was his life, and medical literature has been greatly enriched by his discoveries, by his lucid theories, and especially by his scientific method of study.

He was famous as a Latin scholar, and his extensive library was crowded with Latin medical writers, from

whom, in his lectures, he constantly quoted, in the original, with the utmost fluency.

His experience as a teacher began very early, how early is uncertain, but for more than twenty-five years he was connected with the Charité Hospital of Berlin, as physician, lecturer, and, finally, as University Professor. He became renowned as one of the keenest, coolest, most skilful, most honest clinicians and diagnosticians in Germany, and was called in consultation even to cities far removed from Berlin. He was a clinical lecturer to whom it was a delight to listen; for at his hands a case became fascinating, such were his clearness and thoroughness. He had the faculty of bringing quickly into view the leading symptoms, followed by minute details which only genius could discover, and which would hardly have been missed if his quiet allusion to them had not revealed their value.

His audiences were composed not only of students and young physicians, but also of wise, mature men, who were glad to come and learn of him. He was a favorite teacher not alone because of his great talent, but because he was *honest*. He never misled others to shield himself, as is done by teachers who were his contemporaries. No man is infallible; and if subsequent events revealed to Traube the slightest error in his previous assertions, his students were at once made aware of it, with clear and good reasons for his error. But he rarely erred. His keen diagnostic insight rendered him almost clairvoyant.

The results of his life-work have been given to the world in his famous "*Beiträge*,"—a collection of his medical papers, comprising three volumes, which should be in the hands of every physician. Unfortunately, they have never been translated. Another work, "*Symptoms of the Diseases of the Respiratory and Circulatory Apparatus*," was begun by Traube in 1868. It was to have appeared in five parts, only one of which has been published, a loss which cannot be sufficiently regretted.

For many years one day with Traube was like another. From 7 to 9 A.M. he was in his laboratory; 9 to 12 at the hospital with his classes and patients; 12 to 4 P.M. he devoted to consultation and private practice (his lunch being hastily eaten in his carriage); 4 to 7 were his hours for office-practice, every moment of which was occupied; then came his dinner-hour, after which a brief recreation with his family, and then a plunge into medical studies, which lasted far beyond midnight.

Traube had two moods,—his hospital and his social mood. At the hospital he was intense in his devotion to his cases, becoming so absorbed as to have offended more than one visitor by what seemed a discourteous manner, which was well understood by those who knew him.

In the home he was winning, gentle, cordial, hospitable; silent at times, perhaps, in the weary later years of his life; suffering, too, from the cardiac affection which was the probable cause of his death, but never speaking without the smile which made his face radiant.

It was a pleasure to sit at his table, for the simple, unclouded geniality of Traube, and the charming hospitality of his wife, created an atmosphere which one did not willingly leave.

Those who know him through his books will entertain the deepest respect for Traube's memory; but to those of us who knew him personally, who have been the recipients of his courteous and kindly hospitality, and have felt the charm of all that made him lovable, this is a loss which adds to our affection for him the sad element of sorrow.

H. O.

PHILADELPHIA, July 8, 1875.

CORRESPONDENCE.

NEW YORK, July 9, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—At the same time that the autopsy was being made in the case of aortic aneurism at Roosevelt Hospital, of which we gave some account in our last letter, Dr. Robert Weir, one of the attending surgeons, had three operations for ununited fracture in the amphitheatre. Two were of the bones of the forearm, and one of the tibia, and all the fractures had been treated outside the hospital.

The main surgical ward at Roosevelt is quite a model in its way. It is in a one-story pavilion, quite a distance from the rest of the building (though connected with it by a covered passage-way), and is as bright and airy a place as one could wish to see. So perfect is the ventilation that even in winter there is seldom or never any of the characteristic hospital odor, which, until quite recently, was always regarded as inseparable from such institutions.

The following notes, taken on a casual visit to the ward, will show something of the ordinary run of cases and the methods of treatment practised in the service of Dr. Weir.

1. Abscess of groin, in an old man. This was not a venereal bubo, and, as it was not traceable either to psoas or to sacro-iliac disease, it was somewhat difficult to account for its causation. Dr. Weir regarded the case as interesting on account of its rarity. The abscess had been evacuated, and was now being packed with oakum.

2. Fracture of lower extremity of tibia, involving the malleolus. In cases like this, with little tendency to displacement, the solution of silicate of sodium, or liquid glass, makes the best splint. The bandage saturated with it can be accurately applied to the part, and it makes a lighter and less cumbersome dressing than the plaster of Paris. It is also recommended for affections of the joints on this account.

3. Amputation at middle third of fore-arm. The patient had had his hand mangled by the cog-wheels of a planing-machine, and when admitted to the hospital it was simply hanging by a shred. In such cases it is always best to amputate some distance above the seat of injury, on account of the bruising of the mus-

cles (as shown by the ecchymoses on the skin), as well as the splintering of the bone in many instances.

The operation had been the circular one; hemorrhage being controlled by the Esmarch method. It was now the third day afterwards, and an erysipelatous-looking blush was seen extending up to the elbow, and in streaks of redness even some distance above it.

Dr. Weir lays great stress on the proper drainage of the stump in amputations, and thinks one great element of the wonderful success achieved by Mr. Callender, of London, is his method of introducing between the flaps a silver tube, like a catheter. An india-rubber drainage-tube may also be used with equal advantage. The stump in this case is dressed daily with a solution of salicylic acid, and cloths wet with the same are continually kept over it. The man has been suffering from traumatic fever, due either to the shock from the injury or to the amputation; most probably the former. Last night the temperature was $103\frac{1}{2}^{\circ}$, and this morning 101° .

4. Swelled testicle (orchitis and epididymitis). In adults this affection is almost universally due to gonorrhœa, though in children it is not unfrequently met with as a concomitant of gravel or stone in the bladder. In this case, however, it was due to injury; the man having struck his genitals against the back of a chair while engaged in fencing. It has been treated simply with a lead-and-opium lotion.

In the early stages, when there is great pain, nothing is so good as the continuous application of the ice-bag, as first suggested by Dider. The hyperplasia and hardening resulting from the affection may be left entirely to time. It was formerly always the custom to strap with adhesive plaster; but this is now given up to a great extent, on account of its often being extremely painful to the patient, as well as really unnecessary. Prof. Van Buren has used with success the oleate of mercury, externally applied, to hasten absorption.

5. Gummy tumor of the leg. It is two inches in diameter, and situated over the anterior surface of the tibia, in its lower third. It is of a dull-red color, gives a distinct sense of fluctuation, and hypodermic exploration reveals the presence of clear serum in it.

The patient was in the hospital once before for the same; became considerably relieved, and went out. He now also has a gummy elevation on the right clavicle, which is quite painful. There is marked paralysis of the right upper extremity and slight loss of power in the lower extremity of the same side, due, in all probability, either to a syphilitic tumor of the brain, or to an exostosis or node on the cranial tablets pressing upon the cerebral substance. Treatment, large doses of the iodide of potassium.

6. Fracture of the patella. This has been treated by a long padded back-splint; while in front two straps of stout cotton cloth, one of which is securely fastened by a roller to the limb above the knee, and the other below it, are buckled securely together just over the seat of fracture. The fragments can thus be drawn firmly together and kept in apposition; and Dr. Weir does

not regard it as necessary any longer to keep the limb elevated.

Very firm ligamentous union has already been obtained in this case, and, as the patient will soon be discharged, he was warned to be particularly careful in going over uneven ground. Persons who have had one patella fractured are very liable to have the other one broken also under such circumstances, on account of the extraordinary strain upon the sound one.

7. Stenosis of the glottis (syphilitic). Laryngoscopic examination shows this to be due to gummy infiltration and ulceration, and the calibre of the opening is so considerably diminished as to produce very great difficulty of respiration. The man says he was once under treatment for the same at the Liverpool Infirmary. He is taking large doses of the iodide of potassium (twenty grains four times a day), and seems to be improving.

Such cases as this often call for tracheotomy, which fulfils two important indications: 1, it rescues the patient from impending suffocation; and, 2, it gives the larynx complete rest, thus allowing the reparative process to go on undisturbed.

At the last meeting of the Board of Aldermen the ordinance in relation to muzzling, capturing, and killing of dogs during the summer months was called up for consideration, and, after some debate, defeated by a considerable vote. This was probably due to the outside influence brought to bear upon them. In the first place, the indefatigable Mr. Bergh had addressed a letter to the Board, in which he spoke of the extreme rarity of true hydrophobia, of the powerful effect of the imagination when the idea of hydrophobia is prevalent, and of the fact that dogs were really more liable to the disease in winter. Last year in this city, he said, there was substituted a most pernicious moral disease for a rare physical disorder; the effect of which was peculiarly depraving to the rising generation. The law directly encouraged robbery and blackmailing, and the reward given for every dog brought to the pound tempted the boys to collect them from the country and bring them into New York. In conclusion, he alluded to the "good old times" under Mayor Hall, when the health of the city compared favorably with its state at the present time, and recommended a masterly inactivity on the dog question. The Board of Health also passed resolutions to the effect that in their opinion the regulation requiring muzzles to be placed on dogs during certain months of the year, with a view of preventing hydrophobia, is inadequate, and that statistics show that more general provisions are necessary, and such as should be enforced throughout the year. The resolutions also requested that the Board of Aldermen should give to the Board of Health an opportunity to present a report and the requirements of a suitable law upon this subject. In advocating them, Dr. Jane-way, the newly-appointed Health Commissioner, remarked that this muzzling of dogs in summer-time is a popular delusion, and that the public mind becomes unnecessarily agitated about hydrophobia by such

action. Medical statistics show, he said, that hydrophobia is exceedingly rare, and that dogs are more susceptible to it in winter than at any other season.

Notwithstanding all the vast amount of talk on the subject, the Harlem Flats nuisance still remains unabated, with the exception of the partial disinfection mentioned in our last. It having been doubted whether the Board of Aldermen really had the power to authorize the Commissioner of Public Works to act in the matter, and, if they had, where the money was to come from to enable him to carry out his plans, the Board of Health, taking advantage of the extraordinary powers granted them in cases of emergency, have ordered that the whole pestilential region be covered with fresh earth to a height not less than two feet above high water, and that the surface be so graded that no water shall stand upon it; and have called upon the Board of Estimate and Apportionment to appropriate the sum of \$60,000 for the expenses of the work. At last, therefore, something seems likely to be done about the matter. It is a disgraceful fact that the Commissioners of Charities and Corrections, notwithstanding all the outcry about it, are even now permitting this same garbage which raised such a stench on the Harlem Flats to be used in filling in the low, marshy ground at the east side of the upper end of Blackwell's Island; on which they propose to erect pavilions for the accommodation of the increasing number of epileptic patients now in hospital. A pleasant prospect, certainly, for the poor epileptics.

That the public baths are appreciated by the poor is pretty well attested by the fact that on one day last month, just after they had been opened for the season, no less than twenty-five thousand persons availed themselves of the use of the only two we have. They must have been terribly overcrowded, and it really seems too bad that New York cannot have a larger number of free baths; for at present but a very small proportion of the population can enjoy the inestimable advantages which such establishments afford. The baths were open 124 days last summer, and there were 749,560 bathers, or an average daily attendance of about 6000, one-quarter of the number being females. No person is admitted to the baths without a ticket, and tickets may be refused for sanitary or police reasons, when deemed necessary.

The number of people who can comfortably bathe at the same time at each of the two baths is about sixty, and the average time allowed to each bather is only ten minutes, though the rules prescribe twenty minutes. In admitting persons to the baths a line is formed, and when a sufficient number to fill the bath have entered, the doors are closed until there is room for new-comers. Before and after working-hours the crowd is said to be enormous, and many have to wait for hours before they can obtain admission. All of which shows how urgent is the demand for increased bathing-accommodations for the people.

Some little time since, an exhibition was given in the City Hall Park of what is known as Galibert's Respiring Apparatus, designed to preserve life amid smoke or foul air of any kind. It consists of a canvas

bag of about the size and shape of a half-barrel, and containing twenty-five gallons of air, which is worn upon the back; being held in position by two straps encircling the arms. Two flexible tubes pass from the bag and terminate in a mouth-piece, and the nose is closed by a clasp, while the eyes are covered with glass protectors. A large pine box having been set up and filled with a dense cloud of smoke, three young men, wearing the apparatus, entered successively, and remained in it fifteen, eighteen, and twenty minutes respectively. They were in excellent condition when they came out, the only change in their appearance being a considerable redness of the face. The air in the bag is said to be sufficient for thirty minutes' respiration, and it is claimed that many lives can be saved by firemen being thus enabled to reach every room of the largest tenement-house (no matter how dense the smoke) and remove the inmates. One of the commissioners and a number of the engineers of the Fire Department were present, and expressed themselves as highly delighted with the success of the experiment.

PERTINAX.

BENICIA BARRACKS, CAL., July 4, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In your issue of June 19, quoting from the *Union Médicale*, you refer to the finding of twelve young sharks in the abdomen of the parent by M. Lesseps, also the confirmatory evidence of Dr. Moinet, of the French navy.

While on duty at Fort Jefferson (Dry Tortugas), Florida, I saw a female shark, fifteen feet long, caught and brought on shore by the men of the command, and on opening her abdomen I found *thirty-one* young sharks, averaging thirteen inches long, as lively as young kittens, and, although entirely sightless, on being put in the wet ditch they swam about for several hours. Their blindness was proven by their striking repeatedly against the scarp and counterscarp wall. Two of them were alive the morning following the capture of the parent.

I cannot agree with Dr. Moinet that boiling was the best way for their destruction. Like Macbeth, being from their "mother's womb untimely ripped" would have made their lifetime very short; far too much so to have left any idea of injury from them in the future. A more merciful course might have been followed.

S. A. STORROW,
Assistant-Surgeon U.S.A.

AMPUTATIONS WITHOUT HEMORRHAGE THROUGH THE USE OF THE ÉCRASEUR.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—As experiences concerning hemorrhage in operations performed by means of the écraseur seem to differ so very much, and as, judging from my own clinical observations, these differences find

explanation in the manner of working the apparatus, and in the time given to the manipulation, I will ask the space required for a paragraph to note that, by slow screwing, conjoined with frequent stoppages, I have, within the past few weeks, twice amputated the tongue, and the same number of times the penis, without occasion to use a single ligature; not less than half an hour being consumed in any of the cases, and as much as forty-five minutes in one of the operations on the penis; the ablation in this instance being made close to the body.

Having used the instrument under many conditions where hemorrhage was the trouble to be anticipated, and having enjoyed in its employment a most satisfactory series of results, I am led to entertain a conviction that success with it resides in slowness of motion, conjoined with stoppages of from one to two minutes, frequently repeated during the tightening of the chain. This method has not seemed to conduce, in my experience, to inflammation, and will prove satisfactory, I think, to others who may incline to a trial of it in place of the rapid and continuous process as commonly practised.

J. E. GARRETSON, M.D.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held Wednesday, April 14, 1875, at 8 o'clock P.M.

PRESIDENT, DR. WILLIAM GOODELL, in the chair.

Dr. W. B. ATKINSON read a paper on chloral.

Dr. J. G. STETLER asked Dr. Atkinson whether there are any reliable tests of the purity of chloral. He had seen it stated that a concentrated solution of potassa is a good test. The chloral, if pure, does not color this at all, or, at most, only a feeble yellow, and evolves the pure smell of chloroform. If the liquid assumes a brown color, with the disengagement of pungent odors, it is said to be unfit for use.

It has been stated that it reduces the coagulability of the blood, and tends to its decomposition: if so, we are debarred from its use in certain cases of obstetrics and surgery, attended by hemorrhage. What are its incompatibles? These ought to be known, as it might be dangerous without this knowledge, as we could not know the nature of the products of decomposition.

Dr. ATKINSON, in reply, said that the test mentioned by Dr. Stetler was probably the correct one,—we must depend upon the druggist for the purity. In regard to its effect on the coagulability of the blood, he could not answer. It might be combined with camphor, calabar bean, opium, quinine, etc.

Dr. KEYSER remarked that about two years ago he was called in consultation by Dr. McRean to see a patient of his who had been taking large doses (sixty to eighty grains) of chloral daily for some time, and who had that morning suddenly lost his vision. The pupils were found largely dilated, vision reduced to mere distinguishment of light.

Ophthalmoscopic examination showed great anæmia of the retina only. Supposing it was caused by the chloral, it was discontinued, and in a few days the sight returned to the normal condition.

He had himself taken two doses of ten grains each for extreme wakefulness when suffering from typhomalarial fever, when he sank into a state of alarming prostration, and his attending physician was compelled to desist from its further use.

Dr. McCREAN spoke as follows:

"I have used hydrate of chloral in typhoid fever attended with restlessness and morbid vigilance, also in the same complaint attended with irritability of the air-passages and bowels, with very favorable results. In hysteria and hysterical convulsions, convulsions of children from whatever cause, whether from arterial or nervous excitement, and in infantile colic, it is an excellent remedy; especially in those extreme crying cases of infants it acts like a charm. It also forms a valuable adjunct to cough-mixture.

"I have never observed any bad effects from its administration, either in children or adults. I prescribe it in fifteen-grain doses, repeated at short intervals, from half an hour to two hours, according to urgencies. As a general rule, I prescribe it in wild-cherry syrup. A useful formula for infants is as follows:

"℞ Hydrat. chloral., gr. xv;
Syrup. pruni virgin., ℥i;
Aquæ menth.,
Aquæ font., aa ℥ss.

"Take half a teaspoonful every half-hour.

"I am, however, not strictly bound to these formulas, always taking into consideration the constitution and condition of the patient.

"I consider hydrate of chloral a safe remedy, and prescribe it in cases where I would not dream of prescribing opiates; and shall prescribe it without hesitation in diarrhoea and cholera infantum by the first opportunity. Also in dysentery, in which I have no doubt of its beneficial results.

"I will give you an instance of its prolonged use in a lady patient of mine, aged about 25 years, of exceeding nervous temperament. I treated her for dyspepsia. She was very melancholy, could not procure any sleep; did not wish to prescribe opiates, for reasons that are obvious: firstly, of producing constipation; and, secondly, to avoid further prostration and disorder of the stomach. I prescribed the hydrate of chloral in fifteen-grain doses (sometimes the dose would have to be repeated) every night, with the desired effect; patient improved, and was soon after discharged. In about a year afterwards I was called in again to see her for a little trifling indisposition, when we had a talk over her former troubles, and she told me, to my surprise, that she had taken the chloral ever since, every night; that she had imagined she could not sleep without it, and that she always arose in the morning refreshed, and with a good appetite. I charged her, however, to discontinue by diminishing the dose every night, and finally stop it, which she did without the slightest inconvenience.

"In conclusion, I will give you my observation and opinion of its *modus operandi*. It is antispasmodic, soporific, and anodyne, allaying erethism, and establishing an equilibrium of action in the system in general: hence it is a safe remedy in all conditions of the system whenever any of this class of remedies is called for."

Dr. BURPEE uses it in typhoid fever, five grains (chloral) every half-hour. One dose often is sufficient, sometimes two are required; but he has never had to use more than three doses to produce the desired effect.

Dr. LEE thought that the subject of chronic chloralism was one of great importance. The remedy is so well adapted to the treatment of hysteroid cases that there is great danger of its abuse by the patient, and it is, therefore, well to be on the look-out for cautionary signals which may put us on our guard when it is being

pushed, perhaps without our knowledge, to a dangerous extent. The symptom alluded to, of impaired and distorted vision, was a significant one. He had observed it in a case which had been a very instructive one to him from the long-continued persistence in the use of the remedy. The case was one of spinal irritation, so called, complicated with severe lateral curvature, in an unmarried lady. He had exhibited five grains of chloral in her case the night before starting on a voyage to a Southern port. This was a portion of the first specimen imported by Messrs. Wyeth. Its effects were so happy that he authorized her continuance of it, under careful restrictions. It enabled her to get through the voyage in comparative comfort; and the relief which it gave her was so great that she ventured to give the same dose to other persons suffering from painful affections in the house where she was passing the winter, and was thus the means of introducing chloral into Florida.

Being at a distance, and being compelled to rely upon her own observation, she found, after a time, that its uninterrupted use produced smarting of the conjunctivæ, a symptom which was relieved by its suspension for a few days.

On watching her closely after her return, he was able frequently to verify this fact, and also further noticed that it was sometimes accompanied by a diminished power of vision. Another symptom which he afterwards detected, and which appeared to him to indicate a more serious degree of toxic action, usually coming on after using the remedy in fuller doses than usual for several consecutive days, was an excessive aching pain in both wrists. This he had been inclined to look upon as a sign of its depressing action on the heart and arterial system. She has probably averaged about ten grains per diem for the past four years, scarcely ever carrying it above thirty, and often omitting it for a week at a time.

Dr. WITTIG said other sedative and soporific remedies are generally distinguished into such as may be given in inflammatory diseases, as, for instance, hyoscyamus, conium, prussic acid, and such as are contra-indicated by inflammation, as, for instance, opium and its alkaloids, promoting its termination in plastic effusion, by the increase of vascular orgasm which they produce. The lecturer seems to have taken no notice of this distinction, since he does not state whether the cases of mania-a-potu and puerperal convulsions, in which he successfully employed chloral hydrate, were owing to, or associated with, inflammation. He has given hydrate of chloral but once in a case of probable puerperal mania; the uterine secretions emitting entirely the peculiar odor of lochia. He used it in fifteen-grain doses at first, and afterwards in twenty grains; however, two drachms of it produced a mere rest for one hour. The patient was then taken to the insane hospital, where she has since recovered.

Dr. WOODBURY, in regard to the vehicle, said he had found peppermint-water the best to cover the pungent taste of the drug. Although the alkalies were stated to be incompatible, the bicarbonate of sodium is not; but, on the contrary, had been recommended to be added to increase the effect of the chloral (Haynes, *Chloral in Phthisis*, *American Journal of the Medical Sciences*, October, 1874).

Mr. SHINN said that the crystalline form was probably the best test of purity. To his knowledge, a child had recently taken thirty grains in a mistake, without bad results. Also, a lady had been taking five grains on retiring, during a period of three years, without injury.

Mr. REMINGTON had seen some of the first specimens, and was satisfied that a great deal of the difficulty in its use has been occasioned by an impure article. Dr. Squibb is the only manufacturer in this country. The

German article was of an irritating character; corks were eaten and the hands were irritated by it. The markets are now supplied with a purer article. It is deliquescent, and this may account for the irregularity of its action on the system. It can be readily obtained of a uniform quality, if physicians will take the precaution to mark their prescriptions "recrystallized."

Dr. W. W. KEEN alluded to the impossibility of administering it to some persons, on account of the delirium produced. Its prolonged use did not, in his experience, establish a chloral habit analogous to that of opium, nor did the dose have to be sensibly increased.

Its use in anatomy was a very important improvement over other agents now in use. Its cost, even if the best chloral were used (injecting, say one-fourth of a pound, dissolved in six or seven pints of water), was far less than in using other agents, and a damaged article could be had for one dollar per pound, which answered perfectly well. The advantages were that the color was perfectly retained, there was no odor, and if essential oils be used the subject could be rendered even attractive. The tissues were not hardened at all, nor were they softened, unless too much water were used. In fact, everything about the subject has a *living* appearance.

The pathological uses were even more important, as they are more widely needed. Specimens which he had in solutions of five to forty grains to the ounce, after eighteen months were perfectly satisfactory. It renders every specimen accessible at all times, since the jars need not be hermetically sealed, but simply covered or corked, and if evaporation took place to any extent, water alone was needed. The cost was far less than alcohol.

In surgery, as a stimulant and disinfectant (gr. x to f3i), it still in most cases answered admirably; removing fetor, diminishing discharge, and aiding the growth of the granulations. Especially was it useful in preserving urine, both in cases of incontinence and the like, and for microscopical examinations. In saccharine urine it did not answer.

REVIEWS AND BOOK NOTICES.

ZIEMSEN'S CYCLOPÆDIA. Vol. III. CHRONIC INFECTIOUS DISEASES. Wm. Wood & Co., 1875.

The volumes of this great work appear to follow one another with sufficient rapidity and quickness to warrant the expectation that the work will be completed ere the first portions become stale with age. The most important part of the present volume is the section of syphilis, which is at the same time concise and full, and offers on the whole the best treatise of its size that we are acquainted with. Written by Prof. Baumber, of Freiburg, with some advantage, as regards the quality of the English, in favor of the latter. The remainder of the volume is occupied with the discussion of diseases derived from the lower animals,—glanders, anthrax (malignant pustule), hydrophobia, foot- and mouth-disease, bites and stings from snakes and other venomous animals, echinococci, cysticerci, and trichinæ. In each case an elaborate account of the natural history of the affection in the lower animals is detailed before its effects upon man are noted. A great deal of information is given which we would not know where else to look for in the English language, so that the volume seems to us even more valuable than its predecessors, although so much space is occupied with a discussion of diseases rare in this country. It has often seemed to us that it was often more important to be well read in rare

than in common diseases. Like the poor, these ordinary affections are with us always, and their features must grow familiar; but to be able to recognize at once a rare although very fatal disease may be to save the life of a patient.

GLEANINGS FROM OUR EXCHANGES.

ANEURISM OF CAROTID ARTERY MISTAKEN FOR ANEURISM OF THE ARCH OF THE AORTA (*New York Medical Journal*, July, 1875).—Dr. W. H. Draper reports the case of a man, 36 years of age, and a hard worker. Ten months ago he noticed a lump in the neck, which pulsated. Six months ago the voice changed in character, and he complained of a sensation of pressure over the trachea. Recently the tumor increased considerably in size, and there was developed a loud aneurismal bruit extending down to the nipple. The heart was dislocated to the left, the apex-beat being found five inches to the left of its normal position. The diagnosis at that time was made of aneurism of the arch of the aorta. The patient grew steadily worse, became œdematous, and then markedly cyanotic, and died.

At the autopsy, an aneurism was found near the bifurcation of the carotid artery, of about the size of a walnut. The sac was filled with fibrine to a degree sufficient to make it nearly impervious. The right pleura contained an effusion. The main affection, however, was valvular disease, with hypertrophy, of the heart, which was displaced downward and to the left, the apex being in the seventh intercostal space. The aorta was slightly dilated, but only sufficiently to be appreciable.

SUBSTITUTE FOR THE ELASTIC STOCKING (*New York Medical Journal*, June, 1875).—To a limb requiring support, a well-fitting bandage is applied, over which, and on either side, a coat of well-made and strained starch is added. Then pasteboard softened in liquid starch is applied, leaving a line of unstiffened material front and back. Over this is added a bandage, which, in turn, is secured by paste. The limb is now suffered to lie quiet until the apparatus hardens.

To remove the hardened bandage, cut along the unstiffened seams, and dress them, bookbinder fashion, with strips of pasted muslin. Cover the inside with pasted strips to prevent creasing. In this way, and in two parts, a perfect case is made for a diseased limb, which may be removed and re-applied with little trouble, and by almost anybody, as often as necessary. The case is kept free from impurities, smell, etc., by sponging on the inside with a solution of carbolic acid (3j to a quart of water). It is kept clean by first applying an ordinary bandage to the limb, and securing it by the ordinary roller.

OVARIOTOMY (*Atlanta Medical and Surgical Journal*, June, 1875).—Dr. A. Couvert, who has lived on a large farm for some years, and who seems to have successfully combined his agricultural and professional pursuits, asserts that the following points are well established by experience: 1. Effused blood into the cavity of the abdomen does no harm—to a hog. 2. The hog, when cut through the thick muscles of the side, suffers less and recovers sooner than when cut through the thinner but tendinous median line. Many die when thus cut; rarely one dies when cut in the side. This may be due, in part, to the tissues involved, and partly to the weight of the viscera straining the sutures, in one case thus opening the wound, and in the other keeping the lips in apposition, almost without the need of a stitch. Usually the incision in the median line requires three sutures; the side but one.

A CASE OF DOUBLE HERNIA ON THE SAME SIDE (*The New York Medical Journal*, July, 1875).—Dr. James S. Green reports an unusual case, the interest of which consists in the existence on the same side of two hernias, both of which were strangulated: one *an oblique* inguinal rupture of long standing, in which the intestine was adherent to the sac, and which was relieved by taxis at the commencement of the patient's illness; and the other a *direct* inguinal hernia of recent origin, which was undiscoverable until after an explorative operation was attempted, and which was the real seat of the patient's danger.

Another point of interest was, that the tumor of the old oblique hernia could be reproduced by pressure upon the abdomen above the internal ring, and that the swelling immediately disappeared upon the removal of the hand, the flatus filling the intestine returning into the abdominal cavity, showing that the stricture had been removed by taxis, but that the intestine was adherent to the sac.

THE VOMITING OF PREGNANCY (*The American Medical Weekly*, June 19, 1875).—Dr. Copeman, of Norwich, gives his experience of the vomiting of pregnancy. Of drugs, he has found calumba and oxalate of cerium most useful, but these, like all other drugs, sometimes fail. In this case, he recommends dilating the os uteri with the finger, a method which he discovered by accident in the following case. A lady, six months pregnant, suffered from very exhausting sickness, and it was thought necessary to induce premature labor. Dr. Copeman dilated the os uteri with his finger, but, not having any proper instrument, he did not succeed in rupturing the membrane. The sickness, however, ceased, the patient went to the full period, was delivered of a healthy child, and made a good recovery. He has adopted the same method since at the second month, and in the eighth month with perfect success. In these cases he has found the external os puckered, and takes care to make it smooth as well as to dilate it.

AN EASY METHOD OF REPLACING THE RETROVERTED GRAVID UTERUS (*Kansas City Medical Journal*, June, 1875).—Dr. S. N. Denham gives the following directions for replacing quickly and safely a retroverted gravid uterus: "First, empty the bladder; second, place the patient in the position described for using Sims's speculum, or on the back with the knees drawn up (the former is preferable); third, introduce into the vagina an india-rubber bag, or a bladder, with syringe attached so it can be filled with water; fourth, fill the bag with tepid water until some pressure of the perineum is complained of, or the uterus has been discovered, by the hand placed on the abdomen, to have assumed its proper position; fifth, empty the bag or bladder and remove the same. Repeat the operation if the first is not successful, increasing the pressure until the desired effect has been produced."

DANGEROUS COMPOUND (*Lancet*, June 19, 1875).—The *Pharmaceutical Journal* of Vienna states that the following prescription was sent to a pharmacist:—Chromic acid, eight grains; glycerin, one drachm. External use. The dispenser dissolved the acid with a little water in a phial by a little shaking; the glycerin was then poured in, and the phial again shaken. Thereupon the compound exploded with a very loud report, and was carried with great force to the ceiling of the shop. The phial, which did not break, became coated with a black pigment, and remained in the hand of the frightened dispenser. The case deserves attention from the fact that the ingredients were in such small quantities and the explosion so powerful.

STRYCHNIA AS AN ANTIDOTE TO ALCOHOLISM.—Dr. H. C. Morey (*Pacific Medical Journal*) reports the

case of a man who takes large quantities of strychnia to remove the effects of a long-continued debauch. The amount taken corresponds with the length of time he had been drinking and the amount of whisky consumed. On one occasion, when threatened with an immediate attack of delirium tremens, a dose of twenty grains of strychnia restored him to soberness in an hour. For fourteen years the case had been under the doctor's observation. The man was often drunk, and as often rendered sober by strychnia.—*Detroit Review of Medicine and Pharmacy*.

DR. CLAPHAM asserts (*Western Lancet*, June), as the result of an experience of one hundred and twenty-four cases, that nitrite of amyl is an almost infallible cure for sea-sickness. He allows the subject to vomit once, and then exhibits three drops rapidly by inhalation so as to make a decided impression. He has never known a return of the sickness.

DR. A. W. GERRARD (*Pharm. Journal and Trans.*) believes that he has found an alkaloid in jaborandi, and gives the name of *pilocarpine* to it.

MISCELLANY.

TRUE HOMŒOPATHY.—In a report of clinical cases by Dr. L. W. Berridge, *American Journal of Homœopathic Materia Medica*, January, 1875, the following appears:

"Case V.—Mr. — for four years has had pedunculated wart on left neck; for last few days it has become red around and increased in size; smarts at times; when touched it pricks and is very tender. *Lycopod.* 2000 (Bœricke) one dose; wart fell off during next night, to his great astonishment, and was quite well in the morning."—*St. Louis Clin. Record*.

AN OLD FRIEND IN A NEW ROLE.—A Cincinnati genius has discovered that "if nice fat bedbugs are placed in a saturated solution of nitrate of potash in water, and exposed to the air for several days in an open vessel, a very delicate and delicious odor is formed."

AMONG the many mottoes that decorated the Tabernacle on the last anniversary of the advent of the Mormons into Utah was, "Utah's Best Crop—Children."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 13, 1875, TO JULY 19, 1875, INCLUSIVE.

FRYER, B. E., SURGEON.—Relieved from duty at Fort Wadsworth, New York Harbor. S. O. 135, Military Division of the Atlantic, July 10, 1875.

COWDREY, S. G., ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 139, A. G. O., July 12, 1875.

AINSWORTH, F. C., ASSISTANT-SURGEON.—Relieved from duty at the United States Military Academy, West Point, New York, and to report by letter to the Surgeon-General. S. O. 141, A. G. O., July 13, 1875.

PORTER, JOS. Y., ASSISTANT-SURGEON.—Assigned to duty with troops temporarily encamped at Indian Key, Florida. S. O. 127, Department of the Gulf, July 13, 1875.

LORD, GEO. E., ASSISTANT-SURGEON.—Assigned to duty at Fort Snelling, Minnesota. S. O. 128, Department of Dakota, July 8, 1875.

SATURDAY, JULY 31, 1875.

ORIGINAL COMMUNICATIONS.

PHYSIOLOGICAL ACTION OF GELSEMIA.

BY J. OTT, M.D.,

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GELSEMIA was first procured in a pure state by Prof. Wormley. Mr. Henry Kollock, C. L. Eberle, and Prof. Maisch also obtained it, but in an impure state. The alkaloid is always found combined with an acid called gelseminic. As an average of several experiments, Prof. Wormley states that there are about 3.20 grains of gelsemia in eight fluidounces of Tilden's fluid extract. Wormley said one-tenth of a grain of chloride of gelsemia given by the mouth in a cat caused frothing, in twenty minutes great weakness of extremities, walking with much uncertainty; in forty minutes extreme prostration, entire inability to walk, plaintive cries. Six hours after taking the poison the animal was comparatively well, although the gait was uncertain. Three days afterwards, in the same cat, one-eighth of a grain of gelsemia in shape of chloride caused in fifteen minutes great distress, moaning; in forty minutes great prostration, great difficulty in moving, the legs giving way; progression being as often backwards as forwards; pulse 230, very feeble; respiration gasping, greatly reduced; pupils dilated to fullest extent. Death in an hour and a half after taking the poison, without convulsions.

Bartholow* experimented with an aqueous extract of gelseminum and a little gelsemia obtained from Wormley.

He concludes that in cold-blooded animals it acts on the nerve-centres, paralyzing the sensory ganglia, and afterwards the motor; that it does not affect muscular irritability of the peripheral nerve-fibres. In warm-blooded animals the same effects were observed, save only that the motor centres were the first attacked, instead of the sensory; that it kills through the respiratory apparatus; that in a pigeon it reduced the temperature from 107° F. to 104° F., and in a kitten from 102° F. to 98° F.; that there is no antagonism between it and strychnia; that it dilates the pupil. My gelsemia was made by Messrs. Hance Bros. & White, of Philadelphia. It was yellowish, odorless, with a bitter taste; concentrated sulphuric acid added to a small quantity of it produced a reddish solution, which when moderately heated passed into a fine purple, and nitric acid gave with it a greenish color. It undoubtedly contained some resin. The solution that I used was neutral, and each cubic centimetre contained one centigramme of gelsemia dissolved by acetic acid. On account of the small quantity of the alkaloid in my hands, I also made some experiments with Tilden's fluid extract, a concentrated tincture repre-

senting in each fluidounce four hundred and eighty grains of the root.

ACTION ON THE NERVOUS SYSTEM.

Exp. I.—Very large frog, received at 8.23 A.M. .02 gramme of gelsemia subcutaneously; remains quiet. 8.35 A.M., has a crouching attitude, sensibility much diminished. 8.50 A.M., .04 gramme subcutaneously. 9.35 A.M., .02 gramme subcutaneously. 9.50 A.M., the lower jaw is commencing gradually to relax; moves about occasionally. 10 A.M., croaks and struggles some, suddenly turns himself on his back, in a state of convulsive movements; sensibility exaggerated; twitching of muscles of the extremities for a few minutes. 10.22 A.M., sensibility nearly lost, although movement retained. 10.35 A.M., animal dead. The peripheral end of sciatic irritable at forty-two centimetres Dubois coil; the gastrocnemius directly irritable at twenty-nine. Section of cord gives a slight twitch in extremities.

Exp. II.—Very large frog, received at 11.7 A.M. .06 gramme of gelsemia subcutaneously. 11.24 A.M., sensibility diminished. 12.20 P.M., sensibility very little; upon pinching makes vigorous movements; lies with extremities extended; muscles of lower jaw relaxing. 12.45 P.M., .02 gramme subcutaneously. 1.40 P.M., makes forcible movements of extension with posterior extremities; sensibility very small. 2.10 P.M., .02 gramme subcutaneously. 2.45 P.M., frog dead. Peripheral end of sciatic irritable at twenty-nine centimetres; muscles directly irritable at seventeen centimetres; spinal cord non-excitabile; heart beating twenty times per minute.

The above experiments show that gelsemia produces loss of sensibility, want of co-ordination and paralysis of motor power, and finally death. The loss of sensation always precedes that of motion.

Exp. III.—Frog with right iliac artery and vein tied, received at 8.35 A.M. .04 gramme of gelsemia; hops away. 8.50 A.M., sensibility much diminished; 8.54 A.M., .02 gramme subcutaneously. 9.35 A.M., .02 gramme; sensibility greatly reduced; lower jaw hanging down; lies with extremities stretched out; loss of co-ordination. 10.5 A.M., suddenly struggles with posterior extremities. 10.22 A.M., sensibility nearly lost; can move when pinched. 10.23 A.M., dead. Peripheral end of sciatic on poisoned side is excitable at thirty-seven centimetres; on normal side at forty-three centimetres; no reflex action by irritating central end of sciatic; thrusting probe down the spine gives a few feeble twitches; the gastrocnemius on sound side by direct irritation responds at twenty-eight centimetres; the gastrocnemius of poisoned side is excitable at same distance of secondary coil from the primary.

This experiment shows that the poison attacks the sensory ganglia first, and then gradually paralyzes the motor ganglia; that it has no action on the muscular system.

Exp. IV.—Rabbit; at 4.25 P.M. received .01 gramme gelsemia per jugular. 4.27 P.M. to 4.31 P.M., .04 gramme gelsemia. After each injection there were convulsive movements. 4.33 P.M., the rabbit seems unable to move; feet slide from under him; muscles of neck seem especially weak, as head falls down on floor; rolls over on side occasionally. 4.40 P.M., convulsive movements of the fore extremities and muscles of lower jaw; the jaws snap together; violent expiratory movement, accompanied with a crying noise; pupil dilated. 4.41 P.M., animal dead; cord gives a few very feeble twitches on probe-thrust; motor nerves excitable; heart beating.

* Practitioner, October, 1870.

Exp. V.—Pigeon; at 12.35 P.M., received subcutaneously 2.5 cubic centimetres of Tilden's fluid extract of gelsemium. At first he walks off with a slight limp in the leg which received the poison; closes his eyelids frequently; remains stationary, with commencing ruffling of feathers. 12.40 P.M., sits down. 12.42 P.M., vomiting of food; the closing of eyes is less frequent; has a reeling walk. 12.55, respirations nine to twelve per minute. 1 P.M., eyelids nearly closed; feels and hears; staggers greatly; raises head with difficulty. 1.30 P.M., flapping of wings and great agitation, and then death ensues; spine not excitable; muscles are. When poles are placed over eye, the pupil contracts, and when removed it rebounds; no lesion discoverable.

Exp. VI.—3.10 P.M., rabbit received subcutaneously four cubic centimetres of fluid extract of gelsemium. 3.15 P.M., the extremities of feet lose their power, although the animal manages to locomote. 3.40 P.M., rolls backward on long axis; moves about; great difficulty in expiratory act; pupils dilated. 4.5 P.M., death. Right side of heart filled with blood; left side flaccid, and nearly empty; heart beating feebly.

The above experiments show that gelsemia is a respiratory poison; that it attacks the motor ganglia, and finally the sensory, reversing the order as compared with cold-blooded animals.

EFFECT ON THE CIRCULATION.

That the method of experimentation may be better understood, I give a short résumé of cardiac physiology as taught at present.

The heart contains ganglia which send motor fibres to the cardiac muscle. In addition to motor ganglia there are other ganglia, called regulating ganglia, which co-ordinate the action of the heart, and act on the muscular fibres of the heart through the motor ganglia. The regulating ganglia oppose a certain resistance to the transmission of motor impulses to the cardiac muscle,—that is, governing the rhythm, and preventing the motor ganglia from exhausting themselves by irregular and excited action. Although the heart contains its own power of action, yet there are afferent and efferent nerves which play an important part in its movements: the pneumogastrics when irritated slow the pulse and augment its force, whilst the accelerators increase their number, but diminish their power. The pneumogastrics are especially excited by carboic acid, decrement of temperature, and the sad emotions, whilst the accelerators are particularly thrown into action by the exhilarating emotions, increment of temperature, and oxygen. The brain also takes part in the regulation of the circulation through the vaso-motor centre situated in the medulla. This centre regulates the calibre of the small arteries, diminishing or increasing the amount of blood flowing through them. The cardiac afferent nerves just described can be thrown into increased action by sensations through the terminations of the sensory nerves in any section of the body: hence the irritation of any portion of our skin can modify the amount of blood which flows through our body in a certain time, thus altering by necessity the functions of other organs. This fact explains the action of many external remedial agents, as baths, sinapisms, actual cautery, etc. The

afferent nerve-fibres of the heart are the depressors of Ludwig and Cyon; they are the mechanism by which rupture of the heart by great arterial tension is avoided; as an excited action of the vaso-motor centre might cause. They convey the impulse from the heart to the vaso-motor centre which is paralyzed, and thus the small arteries are relaxed and the heart empties itself, the tension decreases, and everything works freely; they are the safety-valves of the heart, similar in function to those found on steam-engines. These nerves also convey to the brain the sensations of a light, heavy, or palpitating heart.

In a pamphlet* published some time ago, I recorded some experiments on the circulation with an aqueous extract of gelsemium. As there were many other organic and inorganic bodies necessarily introduced with the gelseminate of gelsemia, the observations can only be of value as confirmatory of the action of the alkaloid. In the main they support the conclusions drawn from the following experiments. The circulation as influenced by this poison was studied on rabbits benumbed by sulphate of morphia, both in the interests of humanity and the experiment itself. The pulse and pressure were noted by Ludwig's mercurial manometer on the drum of his registering apparatus. The rate of movement was marked on the drum by an electro-magnet every second. By a lever attached to the electro-magnet the beginning and end of each injection were registered, as well as the time during which a nerve was irritated. The instruments used for irritation were one Grove cell eighty-one millimetres high and fifty-eight millimetres in diameter, Dubois-Reymond's induction apparatus, and Ludwig's electrodes. As the poison caused convulsive movements, curare was used to eliminate the action of the muscular system on the circulation. The gelsemia was injected towards the heart through the jugular or one of its branches, no air being allowed to enter; artificial respiration similar to normal was kept up, by an apparatus on the principle of Sprengel's blower, at regular intervals, by an electro-magnet and metronome: the carotid artery was used for kymographic observations. The blood-pressure is given in millimetres of mercury, and the pulsations for periods of fifteen seconds.

Exp. I.—Rabbit; tracheotomy; jugular and carotid prepared; curare; artificial respiration.

TIME.	PULSE. PRESSURE.	
	60	102
A.M.		
9.25.00	60	88
9.25.45	52	98
9.26.45	55	99
9.27.45	54	97
9.49.45	56	90
9.57.15	45	60
9.59.00	52	50
10.22.00	49	38

Gelsemia .01 gramme.

Exp. II.—Small rabbit; tracheotomy; jugular and carotid prepared; curare; artificial respiration.

* Cocain, Veratria, and Gelsemium. Toxicological Studies, 1874.

TIME.	PULSE.	PRESSURE.
	51	72
P.M.		Gelsemia .01 gramme.
6.0.15	51	36
6.0.30	50	32
6.0.45	46	28
6.1.00	45	22
6.1.15	46	26
6.2.45	46	23
6.3.00	45	23
6.3.45	44	26
6.5.00	48	24
6.6.15	46	25

The above experiments demonstrate that in gelsemia we have an agent which reduces the pulse and pressure, the latter greatly.

Now, physiologically, the pneumogastrics either by central or peripheral stimulation have the ability to reduce the pulse.

The pressure can be reduced by diminished tonus of the vaso-motor system or weakened heart.

That I might find out if gelsemia reduced the pulse-frequency by central stimulation of the pneumogastrics, they have been divided in the following experiment:

Exp. III.—Rabbit. Tracheotomy; carotid and jugular prepared; vagi cut; curare; artificial respiration.

TIME.	PULSE.	PRESSURE.
A.M.	51	92
		Gelsemia .01 gramme.
11.36.30	51	53
11.36.45	52	68
11.37.15	48	46
11.37.45	46	40
11.38.30	44	28
11.39.45	32	22
11.46.15	38	18
11.54.45	39	20
11.55.00	33	16
		Vagus irritated with Dubois secondary coil at 1 for six seconds; one Grove cell.
11.56.00	37	26
12.00.15	40	36
		Vaso-motor centre irritated indirectly with Dubois coil at 1 for fourteen seconds.

The same sequence of events takes place, so that gelsemia does not reduce the pulse through central stimulation of the pneumogastrics. In atropia we have an agent which is capable of removing the inhibitory power of the peripheral end of the vagi on the heart.

The succeeding experiment shows that even after paralysis of the inhibitory ganglia seated in the heart, gelsemia produces the same result.

Exp. IV.—Rabbit. Tracheotomy; vagi paralyzed by atropin, as tested by strong currents; curare; artificial respiration.

TIME.	PULSE.	PRESSURE.
P.M.	58	126
		Gelsemia .01 gramme.
5.18.15	58	106
5.18.30	52	106
5.18.45	54	114
5.19.15	50	126
5.25.00	53	120

TIME.	PULSE.	PRESSURE.
5.37.40	50	94
		Gelsemia .01 gr.
5.38.55	52	66
5.39.10	47	55
5.42.05	47	88
5.46.20	50	80
		Gelsemia .005 gr.
5.46.35	45	67
6.02.53	42	66
6.39.53	42	44

To study the action of a poison on the heart itself, it is necessary to divide the afferent and efferent cardiac nerves in the neck (that is, the pneumogastrics, sympathetics, and depressors), and to remove the influence of accelerators and vaso-motor centre by section of the cord between the occiput and the atlas. In this manner the following experiment was performed:

Exp. V.—Rabbit. Tracheotomy; all the cardiac nerves in the neck cut; the cord divided between the atlas and occiput; the hemorrhage checked by bovista; curare; artificial respiration; section of cord verified by post-mortem.

TIME.	PULSE.	PRESSURE.
A.M.		
11.34.00	43	18
		Gelsemia .01 gramme.
11.54.45	43	15
11.36.00	42	15
11.37.00	37	15
11.38.00	37	15
11.40.00	36	16
11.41.00	37	16
11.41.25	36	16
		Gelsemia .01 gramme.
11.41.35	35	14
11.42.35	34	13
11.43.35	36	14
11.44.35	34	13

This experiment demonstrates that the cause of the slowing of the pulse resides in the heart itself, as well as part of the reduced pressure. Although the fall of pressure is partly to be explained by decrease of cardiac irritability, yet it is desirable to prove how far the vaso-motor nerves and the muscles in the arterial walls participate. When in the small blood-vessels the circular muscles relax, thus dilating the vessel, there is less blood flowing into the right ventricle, and consequently less into the left ventricle, which, by necessity, throws less blood into the arterial system than before in the same unit of time: consequently this is one factor of diminished pressure.

When the small arteries are dilated there is less resistance to the onward flow of blood, and, of course, less pressure in the arterial system, which is another factor.

When the pressure is diminished, according to the German school, the pulse is lessened. The grand agent in preserving the arterial pressure at its height is the vaso-motor centre. That the vaso-motor centre is not paralyzed to direct irritation the following experiment proves; but there is a probability that its tonus is lowered as the fall of pressure is greater, and more rapid when the centre is active than when its influence is removed.

Exp. VI.—Rabbit. Vagi paralyzed by atropin; tracheotomy; sciatic nerve prepared; Ludwig's gimlet-electrodes screwed into the atlas and occipital bone; Pohl's commutator used, so that the induced current could be sent either to the gimlet-electrodes or the electrodes bearing the sciatic by simply rolling the cradle.

TIME.	PULSE.	PRESSURE.	
A.M.	55	80	
			Gelsemia .01 gramme.
10.35.15	53	70	
10.35.45	52	78	Vaso-motor centre irritated directly for two seconds; secondary coil at 8.
10.38.24	52	50	
			Gelsemia .01 gramme.
10.38.39	51	31	
10.38.54	47	18	
10.39.19	52	18	
10.39.34	53	72	
10.54.11	43	5	
10.54.26	42	3	Depressor nerve irritated eight seconds; Dubois coil at 8.
10.58.30	48	8	
11.06.45	46	22	Vaso-motor centre irritated directly for eight seconds; Dubois coil at 8.

The deductions from the above experiments are:

1. That gelsemia reduces the pulse and the pressure; the latter greatly.
2. That the pneumogastrics are not affected by it.
3. That it reduces the pulse by an action on the heart itself, probably through a paralyzing action on the excito-motor ganglia.
4. That it reduces the pressure through diminished cardiac irritability and decreased vaso-motor tonus.
5. That the functions of the depressor are not interfered with.

ACTION ON THE RESPIRATION.

Exp. I.—Rabbit. T-shaped tube in trachea; jugular prepared; Marey's polygraph registering respiration on Ludwig's drum; the rapidity of the movement of drum being noted by an electro-magnet, marking seconds.

TIME.	RESP. FOR 15".	
	16	
		Gelsemia .01 gramme.
4.34.00	19	Struggle, convulsive movement.
4.34.15	16	
4.34.30	12	
4.34.45	12	
4.35.15	11	
4.36.45	11	
4.37.00	11	
4.40.15	11	
4.53.21	11	
5.01.40	11	
		.005 gramme gelsemia.
5.01.55	11	
5.02.55	10	Convulsive movements.
5.03.35	11	
5.05.15	9	Opisthotonos.
		Gelsemia .01 gramme injected.
5.05.30	12	
5.05.45	11	
5.08.00	7	
5.14.00	6	
5.25.15	1	

The above observation shows that gelsemia gradually reduces the number of respirations. The paralyzing effect on the respiratory centres is the cause of this action, as the poison does not attack either the pneumogastrics, the striated muscles, or the motor nerves.

ACTION ON THE TEMPERATURE.

The following experiment was made with a specimen of gelsemia furnished by Charles McIntire, Jr., formerly Assistant Professor in Lafayette College. The temperature is rectal.

Exp. I.—2 P.M., kitten received subcutaneously .004 gramme of gelsemia in shape of chloride. 2.05 P.M., weakness in posterior extremities; trembling of head and ears; pupil in diameter five millimetres; temperature $101\frac{3}{8}^{\circ}$ Fahr. 2.25 P.M., .002 gramme gelsemia. 2.37 P.M., sinking down on fore-legs, drooping of head, difficult expiration. 2.45 P.M., temperature $101\frac{8}{10}^{\circ}$, pupils same. 2.50 P.M., cries, makes staggering efforts to walk, but sinks into a prone position; backward movements; no co-ordinating power; sphincters give way. 3.40 P.M., .004 gramme gelsemia. 3.55 P.M., temperature $100\frac{3}{10}^{\circ}$; pupil five millimetres. 4.25 P.M., .004 gramme. 4.56 P.M., pupil six millimetres; .002 gramme gelsemia; temperature $99\frac{1}{10}^{\circ}$. 5.5 P.M., pupil seven millimetres; reflex movement in cornea. 5.10 P.M., .004 gramme gelsemia; death; chest opened; auricles beating, but not ventricles; intestinal peristalsis present; cord not excitable; muscular irritability good; no reflex action; heart excitable when electricity applied.

Exp. II.—Rabbit. Temperature $103\frac{2}{5}^{\circ}$ per rectum 8.40 A.M., received subcutaneously $2\frac{1}{2}$ cubic centimetres of fluid extract of gelsemium. 8.45 A.M., temperature $103\frac{1}{5}^{\circ}$. 8.52 A.M., four cubic centimetres fluid extract gelsemia. 9 A.M., temperature $103\frac{1}{5}^{\circ}$. 9.12 A.M., temperature $102\frac{2}{5}^{\circ}$. 9.45 A.M., temperature $101\frac{1}{5}^{\circ}$. 10.20 A.M., injection four cubic centimetres fluid extract gelsemium. 10.30 A.M., temperature 99° . 11 A.M., $98\frac{1}{4}^{\circ}$. 11.5 A.M., animal dead.

These experiments show that gelsemia reduces the temperature.

To make more complete and practical the study of the action of gelsemia, I give the following experiments on man,—cases of poisoning. Substantially they are as follows:

Case I.—Reported by R. P. Davis. Lying on left side; muscular relaxation; face somewhat congested; double vision; vertigo; pupils dilated, but responding to different degrees of light; eyelids half closed, with apparent inability to move them; lower jaw drooping; his tongue, to use his own expression, "so thick that he could hardly speak;" skin warm and moist; pulse small and feeble; neither purging nor vomiting; respirations diminished; great numbness of the extremities; surface cold and congested; pulse almost imperceptible. Death took place in about two hours and a half after taking a tablespoonful of Tilden's fluid extract; unconsciousness preceding death for an hour.

Case II.—Reported by R. P. Davis. After same dose, double vision, vertigo, pupil widely dilated, complained of blindness, staggered in walking, deep inspirations, and numbness of whole body; no loss of consciousness at any time; awoke next morning weak and dizzy. The patient in the first case was a

very small, nervous, delicate man; the second case was the reverse, and, besides, he received an emetic soon after taking the poison.

Case III.—Prof. Wormley reports the following case: Young married woman, pregnant, took three teaspoonfuls of Tilden's fluid extract. In two hours complained of pain in stomach, nausea, and dimness of vision. These symptoms were followed by great restlessness, ineffectual efforts to vomit, and free perspiration over the body. At the end of five hours pulse feeble, irregular, and sometimes intermittent; great prostration, irregular and slow respiration; skin dry, extremities cold, pupils expanded and insensible to light; eyes fixed, and inability to raise the eyelids. Death occurred in about seven hours and a half after taking the poison. No convulsions preceding.

Prof. Wormley thinks that these three teaspoonfuls could not have contained more than a sixth of a grain of the alkaloid.

Case IV.—Reported by Dr. Main. He took one drachm of fluid extract of gelsemium. Nearly blind; control over upper eyelids was almost entirely lost; flexor muscles of hands and arms paralyzed; extensors nearly so; sensation in hands and arms blunted, but not in proportion to loss of motion. Before muscles affected, disagreeable sensation in head; mind clear; hands suffered more than the legs.

Case V.—Reported by Dr. Freeman, of Brooklyn. Boy, æt. three years. After taking fifty minims of tincture of gelsemium (made by maceration of four ounces of the root to a pint of dilute alcohol), died in two hours. The symptoms were double vision, staggering gait, complete muscular relaxation.

Case VI.—Reported by Dr. Freeman. Girl, æt. nine years; after dessertspoonful of tincture, had dimness of vision, loss of muscular power, and death in less than two hours.

Case VII.—Reported by Dr. Freeman. Boy, æt. about three years, was to take a teaspoonful every two hours of a mixture containing ten grains of sulphate of quinine, a drachm of tincture of gelsemium, and five drachms of syrup. After first dose, prostration, staggering; in about half an hour after second dose, limp as a rag; pupils dilated, froth, heart beating feebly and slowly, pulse imperceptible at the wrist, could not swallow. Death in about an hour after the second dose.

Case VIII.—Reported by Dr. Pinkham, of Lynn. Double vision, blindness, numbness, oppression, unconsciousness, stertorous, very imperfect breathing, countenance lividly pale, lower jaw drooping, leaving mouth wide open; eyelids partially closed, motionless; pupils moderately dilated; pulse 100 per minute, regular, weak. After friction and stimulus for an hour and a half, consciousness returned, but recovery was not complete for several days, the principal complaint being great prostration, muscular weakness, particularly of the elevators of the lower jaw, eyelids, and muscles of arm. After the return of consciousness, speech was intelligible only when the jaws were supported. The tongue during the poisoning was stiff, and voice guttural. The

dose was pretended to be forty minims of fluid extract, and the patient was a woman.

Case IX.—Reported by Dr. Boutelle, of Boston. Man, æt. twenty-four, at 1 A.M. took a teaspoonful of Tilden's fluid extract of gelsemium. In fifteen minutes he repeated the dose; his pain was soon relieved; eyes felt heavy, and in about half an hour complained of choking; soon arose, struggling for breath, pushing his fingers into his throat as if trying to tear it open. He staggered reeling from one room to the other, as though intoxicated, and shortly afterwards threw himself on the floor, and became unconscious. 4 A.M., respirations gasping, three or four per minute; pulse rapid and feeble; unconscious, could not be roused; pupils dilated, not responding to light; eye could be touched without any contraction of the lids; skin moist; extremities cold; pulse grew slower and weaker. Death in three hours and forty-five minutes after taking the poison, without any convulsions occurring at any time.

An analysis of the above cases of poisoning gives the following as the course of symptoms: Disordered double vision, ptosis, want of co-ordination in the movements, disagreeable feeling in the head, great muscular relaxation, lower jaw drooping, tongue stiff, sensation blunted, pupils dilated, respiration slow and irregular, pulse slow and feeble, surface cold and congested, unconsciousness, and death.

On comparison of its effects on man and warm-blooded animals, the analogy is complete. In man there is the same paralysis of motion, want of co-ordination, diminished sensibility, relaxation of muscles of the jaws and the rest of the body, diminished pulse and pressure, lessened respiration, decreased temperature, and dilated pupils.

The following résumé expresses our conclusions in regard to gelsemia:

1. In cold-blooded animals it paralyzes first the sensory ganglia, and then the motor ganglia in the central nervous system. This order is reversed in warm-blooded animals.
2. It diminishes the pulse and pressure.
3. This decrease of pulse-rate is due to lessened irritability of the excito-motor ganglia of the heart.
4. The fall of pressure is due to diminution of cardiac irritability and vaso-motor tonus.
5. It decreases the respiration through a paralyzing action on the respiratory centres.
6. It dilates the pupils.
7. It reduces the temperature.

The above investigation was made in the Physiological Laboratory of Prof. F. G. Smith, University of Pennsylvania.

OXYGEN IN CONGESTION OF THE BRAIN (*Boston Journal of Chemistry*, July, 1875).—A French physician reports to the Academy a case in which he has succeeded in curing grave congestion of the brain, along with paralysis of the whole right side, by making the patient inhale pure oxygen: from the first inhalation the patient got relief, and motion and sensibility returned by degrees.

A CASE OF CHOREA IN THE NEGRO.

BY W. T. SKINNER, M.D.,

Glasgow, Delaware.

MY attention having been called to the fact, by the inquiries of Dr. S. Weir Mitchell, that chorea in the negro is extremely rare, I deem this sufficient apology for reporting the following case :

May 22, 1875.—D. B., æt. 18, colored (of pure African descent), servant-girl from Philadelphia, has suffered for some time with subacute rheumatism, at the termination of which she was suddenly seized with choreic movements mostly affecting the muscles of the head and neck, characterized by a continual bobbing or shaking of the head. The legs and arms are affected only when she attempts to use them. The movements are all increased by exercise and diminished by rest, and entirely suspended when the patient lies down. The tongue can be thrust out only by some effort. The face is unaffected.

Pulse 144. Slight murmur at the apex, heard most distinctly a little external to the nipple. Menstruation regular. No spinal tenderness or other evidence of hysterical temperament.

I cannot get her family history ; I only learn that she has lost several brothers and sisters, and therefore suppose it is not very favorable.

Her nutrition is bad. She is directed to make use of liberal diet, to take exercise moderately and frequently in the open air ; and, in the way of medicines, cod-liver oil, syrup of iodide of zinc, and tincture of digitalis are ordered.

June 18.—The improvement has been gradual. She now has intervals of rest from the movements, but they are called into operation by any attempt at exercise, such as walking, or even standing. Pulse 80, and regular ; cardiac murmur unchanged. General condition much improved. Same remedies continued, and strychnia, one-twenty-fourth gr. thrice daily, added.

July 14.—Patient still improving ; same treatment continued.

NITRITE OF AMYL IN HYSTERICAL CONVULSIONS, THE COLD STAGE OF INTERMITTENTS, AND CHLOROFORM-NARCOSIS.

BY RUFUS R. HINTON, M.D.

CASE I.—Last February I was called to see Mrs. R., æt. 27 ; she was subject to hysteria, and frequently had convulsions at the time of her monthly sickness. At the time of my visit she had had convulsions at intervals of four or five hours, for four days previous. I found her in a series of subintense convulsions ; the pupils, pulse, and temperature were normal. As the patient had been treated with the bromides, valerian, etc., without relieving the spasms, I concluded to use the nitrite of amyl by inhalation in from three- to five-drop doses ; and in two hours from the time I commenced the treatment with the nitrite of amyl, all symptoms of convulsions were relieved, and the patient has had no convulsions to this date.

I have used the nitrite of amyl in two cases of hysterical convulsions since the one just described : one in a young girl of 16, and one in a married woman suffering with dysmenorrhœa, with like success.

Case II.—A negro man called at my office in the early part of March to be treated for a case of chronic

chills, of the tertian type, which he contracted while working upon the Eastern Shore of Maryland, last fall. As the chill was expected the next morning, I told the patient to go home and send for me on the first symptoms of its coming. When I was called I found the patient with a shaking ague, with ashen hue of skin, feeble pulse, great irritability of the stomach, constant retching. I gave him five drops of nitrite of amyl by inhalation. In a few seconds the ashy hue of the skin disappeared, vomiting ceased, reaction was complete with very little fever ; in two hours from the time I first saw the patient he was out of bed, and by the liberal use of quinine and iron the patient had no more chills.

Case III.—Capt. H. called at my office to be treated for a whitlow involving the first and second joints of the middle finger. Dreading the operation of laying open the finger with a knife, the captain suggested the use of chloroform, which he had taken for two or three minor operations, while in the army, without any bad result. I sent for 3i of Squibb's chloroform, and, pouring two or three drachms upon his handkerchief, directed him to inhale it, at the same time directing him to elevate his hand, intending, so soon as the hand dropped, to lay open the finger. As the hand dropped, I noticed that the patient was of a deathly pallor, and had ceased breathing ; opening his mouth and drawing the tongue forward with a tenaculum, I immediately applied five drops of the nitrite of amyl to the nose and mouth. To my delight, flushing of the face, with violent beating of the carotids, ensued, and the captain opened his eyes, wanted to know where he was, and consented to have his finger incised without the further use of chloroform.

TRANSLATIONS.

ON THE COMPARATIVE ANTISEPTIC EFFECT OF BENZOIC AND SALICYLIC ACIDS.—Prof. E. Salkowski, of Berlin (*Klin. Wochenschrift*, No. 22, 1875), has been making a series of researches with different disinfectants, and particularly with the two above mentioned. The result was markedly in favor of the benzoic acid, whose antiseptic properties were shown to be decidedly greater than those of salicylic acid. This result is quite opposed to that obtained by Kolbe in his recent but very well known researches. Prof. S. thinks the reason of this lies in the different qualities of benzoic acid used. Benzoic acid obtained from balsam has a quite different odor from that obtained from urine, and may, it is likely, have a different effect.

Whether or not this may be the reason, the fact of the superiority of benzoic to salicylic acid, as well as the superiority in cheapness of the former, renders its thorough trial very desirable.

X.

THE URINE OF NEW-BORN INFANTS (Martin, Rye, and Biedermann: *Centralblatt für Med. Wissenschaften*, No. 24, 1875).—From examinations of the urine of seventeen male children during the first ten days of life, the following conclusions were arrived at :

1. The first discharge of urine is very rarely immediately after birth ; is usually at the end of the first day of life, often not until the second or third.

2. The average quantity of the first evacuation of urine is eight cubic centimetres.

3. During the next ten days the amounts of urine discharged are not constant, varying from twelve to sixty-one cubic centimetres.

4. The color of the fluid on the first day corresponds to Nos. 1 and 2 of Vogel's scale ; on the later days the urine becomes gradually almost as light as water.

5. The reaction is almost always moderately acid; very rarely neutral; for if not acid it has usually a marked tendency to alkalinity.

6. The specific gravity of the first urine averaged 1010.5.

7. The specific gravity during the entire ten days varied from 1002.7 to 1010.0.

8. In the urine of each of the children albumen was noticed upon one or more days.

9. Chlorides were found in all the evacuations.

10. The average amount of urea was 0.321 per cent.

11. Uric acid was constantly present in the first urine, and increased in quantity until the third day, when a diminution took place.

12. Under the microscope, the urine of the first day and that of the following days until the fourth was found to contain epithelium from the urinary tract in large amount, varying quantities of epithelium from the uriferous tubules, and masses of uric acid crystals.

W. A.

LEAD COLIC TREATED BY LARGE ENEMATA OF WATER.—Dr. Reisland gives the following case in the *Berliner Klinische Wochenschrift*, No. 21, 1875. He was called to see a man 50 years of age, whose occupation had exposed him for some years to lead-fumes. The patient had suffered for some weeks from pain in the abdomen, with obstinate constipation, accompanied during the few previous days by occasional vomiting. Enemata of various kinds which had formerly emptied the bowels had latterly failed to give relief; ol. ricini in large doses had also been unavailing. The condition of the patient at the time Dr. R. first saw him was almost that of collapse, with frequent general spasm and muscular contractions, particularly of the arms and legs; accompanied by retching and vomiting of bilious matters. His face was pale, grayish-white in color, a distinct lead line could be seen on the gums, the tongue was foul. The abdomen was hard, tense, and somewhat retracted; pain extending to the small of the back, the testicles, and the thighs. Pulse 65, small. Temperature normal. The patient was ordered the following:

R. Ol. croton., gtt. iii.

Ft. in pil. no. xv.

Sig.—Two every half-hour.

In addition, opium in half-grain doses every two hours. In the afternoon, in spite of having taken all the pills and four doses of opium, no relief had been obtained. It was then decided to use large enemata, and for this purpose an irrigator was made use of which would contain about a litre (two pints), having attached to it a yard of rubber tubing and a nozzle of hard rubber.

The irrigator was filled with lukewarm water, the patient took the knee-elbow position, and the nozzle was introduced a finger's-length into the rectum. When the irrigator was raised, the water passed into the intestine in a continual stream; before the irrigator was empty, more water was added, until four and a half litres had been introduced. The patient complained of severe pain, and the injection was then stopped. A few moments after, a partial stool was obtained; then further enemata were given, and the bowels were thoroughly emptied. This procedure was repeated daily for several days, by which time all pain, etc., had disappeared, and the stools were normal. X.

FOREIGN BODY IN THE RECTUM.—Dr. Greinblatt communicates the following case to the *Wiener Med. Presse*, June 20.

He was consulted by a man who gave the following history. Four days previously he had indulged in an unusually large meal without suffering any immediate evil results. Forty-eight hours later, however, he was seized with pain in the stomach; a day later, difficulty

in urinating and impossibility of defecation ensued, and the symptoms increased until he was forced to seek medical assistance. On examination, the abdominal region was found tense and tympanitic. The upper portion was resonant on percussion, the lower dull. The painful region was evidently in the rectum. Exploration in this locality showed an elongated foreign body lodged transversely in the rectum just above the internal sphincter. This was carefully turned endwise, and removed by the aid of forceps. Upon examination, it was found to be a portion of the rib of a lamb, nearly an inch in length, which had passed the œsophagus, cardia, pylorus, small and great intestine, only to become lodged in the rectum. Immediate relief followed its removal. X.

VERRUCA SENILIS (KERATOSIS PIGMENTOSA).—Under this designation J. Neumann describes (*Wien. Med. Presse*, No. 13, 1875) a skin-affection of old people, characterized by the appearance of numerous wart-like tumors particularly upon the back and breast, varying from rusty brown to deep black in color. The friction of the clothing sometimes produces excoriations and ulcerations in these tumors, which, under such circumstances, cause great annoyance. The tumors are formed by the stratified accumulation of epithelial cells on the smooth surface or upon a papillary base. Microscopically, the accumulated epidermis shows nothing abnormal; the atrophied rete Malpighi in its collections of pigment-cells, as well as the adventitia of the vessels, have become rounded masses, whose contents are formed of horny cells, masses of smegma, and lanugo hairs. The sebaceous glands are enlarged, filled with dried smegma, their openings stopped up or atrophied. They project like warty pale-red growths.

Verruca senilis is distinguished from ordinary verruca in that the epidermoid character is more prominent, the papillæ taking no part in the growth itself, for which reason the name keratosis pigmentosa is suggested. Sapo viridis, pencilling with iodized glycerin or with dilute carbolic acid, may be used to bring about atrophy. A shorter method is the use of "Daniel's spoon."—*Berliner Klin. Wochens.*, No. 21, 1875. X.

ALEPPO EVIL.—This affection, known under various synonyms, has long been supposed to be a specific affection, localized in the East, and particularly in and about the city from which its name is derived. Recently, however, an enterprising German, Dr. Geber, assistant to Prof. Hebra, established himself in Aleppo, and set up a skin-dispensary chiefly for the purpose of studying this affection. His conclusion (published in the *Viertel-jahreschrift f. Derm. u. Syphilis*, 1874, 4tes Heft), after a large experience, is that all the forms of Aleppo evil are simply varieties of syphilis. X.

SALICYLIC ACID IN DIPHTHERITIS.—Dr. Hanow writes to the *Berliner Klin. Wochenschrift*, No. 20, 1875, praising very highly the valuable qualities of this remedy in the above disease. He uses the acid in solution, one part to three hundred, as a gargle, or in the stronger solution which is made by the addition of phosphate of sodium. The gargle is used hourly, and in the cases under Dr. H.'s care relief was obtained very shortly. After the third or fourth dose the membrane began to separate, and with the diminishing of the exudation the fever began to disappear, convalescence setting in after twelve hours. X.

ABLATION OF PEDICULATED TUMORS OF THE SKIN BY THE GALVANO-CAUSTIC.—Amussat (fils) recommends this procedure, having had successful results in seven cases, comprising papilloma, lipoma, fibroma, and condyloma acuminata (*Revue de Thérap. Méd. Chir.*, 1875, Nos. 2 and 3).

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

WICKER-WORK COFFINS.

ALLUSION has already been made in the columns of this journal to the idea of Mr. Seymour Haden, that the object of coffins should be to facilitate decay, not to retard it. As the law, dust to dust, ashes to ashes, is as unescapable as death itself, as even the highest perfection of the Egyptian art can but protract the return of the body to the great mother, earth, we confess that we sympathize with the belief of Mr. Haden, that it is better to assist than to attempt to defy nature. Leaden coffins, hermetically-sealed caskets, are, after all, but the devices of the undertaker to take advantage of human weaknesses. It is related of an old Scotch stone-cutter, that when asked how it was he always succeeded so well in selling expensive tombstones, he replied, "I talk to them till I see a tear in their eye, and then I strike." Led by undertaker and tombstone-maker, many a widow has expended upon the burial of her shattered hopes money that should have been garnered up for the living. The reform proposed by Mr. Haden is to do away with all temptation to undue expense.

Just here, some of our readers may desire to know who this Mr. Haden is. He is no ordinary man; indeed, according to our thinking, he is a very remarkable man,—a living reprobation of the time-honored but narrow and untrue belief that to be a successful doctor one must be a doctor and nothing else. Mr. Seymour Haden is widely known as a medical practitioner; but the chief glory and, no

doubt, the chief joy of his life is that he is the "most original and accomplished etcher now alive in Great Britain."

The coffins advocated by Mr. Haden are to be of wicker; made with a strong, pliant osier,—a double thread being preferable,—with as wide meshes as is consistent with holding the flowers, ferns, mosses, evergreens, etc., in which the body is to be laid. In order to facilitate the recognition of the bones if it should ever happen to be desirable, an engraved leaden band is to be tied around the wrists, a second around the legs, and a third passed through the chest.

The procedures when death has occurred are as follows:

"As soon after death as may be, the body is to be sponged, the eyes are to be closed, the chin supported, the limbs composed, and the hands crossed upon the breast. Superfluous bedclothes, together with the impediments and rejections of the sick-room, are to be removed, and a window is to be opened a few inches both at the top and at the bottom. The papers of the deceased may then be examined, and, if these contain nothing to forbid it, the first preparations for the funeral may be made in the following way. As part of the ordinary stock-in-trade of every turner, brush-maker, or basket-maker, will be found, nested one within the other, and of every form and dimensions, the necessary covering or coffin; at every herbalist's or florist's, its garniture. Both, being light and portable, may be delivered at the house in an hour or two, and the body may be at once laid in it and strewn (except the face and hands, which should be left exposed) with its evergreen covering. All this may be done by the nurses or older servants or members of the family, and no stranger need be admitted. There is now ample time to consider arrangements, for the visit of the physician or surgeon charged to verify the fact of death, to telegraph to friends, and to make final preparations for the interment. The morrow come, and everything prepared inside and out, the necessary agents for the interment will enter the house for the first time and the last, and remove the body in a suitable carriage, either by railway or by water, to its resting-place outside the city, one of the male representatives of the family in every case accompanying it. There will be no procession through the streets,—no opportunity for display,—nothing to elicit either the sympathy or the criticism of the neighborhood (both on such an occasion equally out of place); but, arrived at the cemetery, the body will wait in the mortuary chapel attached to it, with those who are to be present at its interment. These, having been informed of the death, will go and return as their desire, affections, or respect for the dead impel them. The assembly will be in the chapel, and at the grave-side only, where the mourners, men and women (for, since there is to be no public display, both may go), will find the trellised coffin on its bier, garnished and beautified by

loving hands, awaiting them. Not a word of our burial service will be omitted, though more may be said in the chapel and less at the grave-side, and then all will be over. There will be no reunion at the house of death. The conventional feast will not be spread. The formal reading of the will will be at the office of the legal adviser of the family on a day appointed for the purpose; and the inmates of the house of mourning will return to it and be allowed to remain undisturbed. Next day every one will to his business."

The care of Mr. Haden does not stop with the burial. Where there is a deep, loamy soil, with a gravel substratum, natural grave-yards may be employed, but in most large cities he thinks artificial cemeteries are to be preferred. A series of experiments should first be made to determine what form of soil will most facilitate rapid decay. It will probably be found that an earth composed of fine carbon soil, sand, and lime, is the best; but, whatever compound is decided upon, an artificial soil of about twelve feet in depth forms a basis of this model grave-yard.

So far as this country is concerned, the artificial cemetery is certainly an absurdity,—the expense of making it and the comparative cheapness of land being insuperable objections. Mr. Haden's coffins may possibly come into use; certainly his method is better than cremation, in that it is not only less expensive, but is infinitely less repulsive to the overpowering instincts generated in the Anglo-Saxon breast by custom and teaching immemorial.

Indeed, prejudice is so strong, class interests so powerful, that had not Mr. Haden unexpectedly secured the eager aid and patronage of the Duke of Sutherland, his propositions would have been, even for England, as wild beating of the air as have been all the efforts to introduce cremation.

The duke appears to be an enthusiastic amateur philanthropist, and, being placed above absolute want by his inherited estates and by his marriage, has plenty of leisure for whatever he undertakes. Moreover, as he holds by his own right in the county of Sutherland 1,176,343 acres of land, and in the name of his wife 149,879 acres in the adjoining county of Ross, he is not without influence in a country like England, "in which the possession of land gives a factitious importance even to the humblest and poorest possessor such as no amount of stocks and shares and bankers' balances can ever give." On the 17th and 19th of June the duke gave what may be termed coffin receptions at Stafford House. All London was invited, and all London was there,—some to see the duke set in a framework of coffins, some to see Stafford House, some to see the crowd, and a

few to see the coffins. Flirting among the coffins, if not "the ruling passion strong in death," was something akin thereto. Altogether, we conceive that West End London has had a new sensation, which certainly is a thing for which many *blasés* ought to be thankful, and Mr. Haden has had an advertisement among the wealthy and the titled, which ought also to be a cause of thankfulness—at least to him.

We have received the *New Orleans Picayune*, detailing a meeting of the New Orleans Medical Protective Association. At this meeting all the members agreed that they would not make contracts of service with any associations. It appears that there are in the city a number of what seem to be mutual benefit associations, and that it has been the custom for physicians to agree to serve them by the year at "five, ten, and twelve cents" a visit, as the case might be. At the meeting it was announced that all the holders of such positions had tendered their resignations. If the profession keep together, no doubt the practice of contracting with associations will be done away with. Probably this is the best solution of the question; but we have often wondered whether it would be possible to regulate, by a stern professional law, the "contract system" without abandoning it. It certainly would be better for an impecunious doctor to attend at fifty cents a visit by contract than at \$0.00 without contract.

THE Royal English Commission appointed to consider the subject of vivisection is composed of Lord Cardwell, Lord Winmarleigh, Mr. Forster, Sir John Karslake, Mr. Erichsen, Prof. Huxley, and Mr. Hutton. The London *Lancet* says of them, "Those who, like ourselves, desire to see the subject calmly and dispassionately considered from all points of view will regard these names as a guarantee that such will be done."

Mr. Hutton has taken an active part against vivisection, but is said to be a well-meaning, candid man, and Prof. Huxley is certainly no less committed in favor of vivisection.

REMARKABLE SUCCESSION OF BREECH-PRESENTATIONS.—Dr. Nourse (*Clinic*) relates the case of a lady aged forty-three—married twenty-five years—had eleven children, all being breech-presentations. Mother was a healthy woman, medium height, with a well-developed pelvis. Children were also well developed, of fair size, and with heads of the usual size. The only peculiarity of the labors was the regular recurrence of the exceptional presentation.—*Detroit Review of Medicine and Pharmacy*.

CORRESPONDENCE.

BALTIMORE, July, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The medical societies have adjourned until September; the colleges are making additions to their hospitals, and otherwise preparing for the fall campaign; Prof. Gilman has gone to Europe, and expects to bring back some famous men to fill chairs in the Hopkins University; the Hopkins Hospital still shows no signs of life; and the whole city, sweltering in the midsummer heat, enjoys the hydro-sulphuretted odors of the basin and the balmy breezes from the Falls.

The infant mortality here has been excessive. One week, out of 269 deaths, 168 were under five years, and about 90 of these were returned as from cholera infantum.

I was quite interested in an article in a late number of the *Times*, from Dr. Comegys, on summer-complaint. Cholera infantum is considered by many of our physicians as a heat-fever. The nervous system of the child, being very delicate, feels the full force of the extreme heat, and the vomiting and purging are only evidences of disordered nervous action, and not indicating inflammation of the stomach and bowels. Two forms of the disease are recognized,—the congestive and the syncopal. The former is the most dangerous, and requires the copious use of cold water externally and quinine internally. The syncopal requires quinine and stimulants, given in small and frequent doses. After the urgent symptoms have passed, bismuth may be used should the diarrhoea persist, but I have seen many cases, apparently dangerous, promptly relieved by quiniæ tannas, gr. $\frac{1}{2}$ -j; elix. valerian. ammon. (not Hubbell's), gtt. v-xx, every two hours. I think the success with this mode of treatment is greater than with the old calomel, chalk, and astringents. Of course, the large majority of our physicians adhere to the entero-colitis pathology, and treat accordingly.

I was pleased to see a paragraph that old Jeff. had purchased ground adjoining the college building for the purpose of erecting a hospital thereon. As I am an alumnus of that school, I earnestly desire its prosperity.

Here we have three schools.

The University of Maryland has a small but well-managed hospital under its control, to which it has just added a new wing, about 30 by 90 feet, and three stories high. The professors are Drs. N. R. Smith, Chisolm, Johnston, Donaldson, Chew, McSherry, W. T. Howard, Tiffany, Miltenberger, Miles, and Aiken.

The Washington University has also been making some additions to its hospital. This building, situated near the centre of the city, gets nearly all the accident cases, and thus its wards are generally well filled. Drs. J. F. Monmonier, Arnold, Lindsay, Trist, Scott, Clagett, Green, and J. N. Monmonier are professors.

The College of Physicians and Surgeons has established a lying-in hospital, which is in a flourishing condition, and fills a want long felt in this city. The pro-

fessors are Drs. Lynch, Erich, Brown, Latimer, E. L. Howard, Atkinson, Friedenwald, Bevan, Opie, and Goolrick. The other hospitals of the city are, Hebrew, St. Agnes's, St. Joseph's, Church Home, Union Protestant Infirmary, Bayview Asylum, and Mount Hope.

We have ten dispensaries, which do much good and much harm. It is impossible to prevent persons able to pay for medical services from receiving aid from our charitable institutions; and, like all other cities, we are educating a class of permanent paupers.

Some time since, I wrote that our city enjoyed the blessings of the night-cart. I am happy to say that the above statement is no longer true. The firmness of the mayor and our efficient commissioner of health, Dr. James Stewart, has given us what we never had before,—a summer free from the noise and stink of the sink-cleaning brigade. The odorless apparatus has free control, and gives general satisfaction to the citizens. Our city council showed its appreciation of the voting capability of the night-force by repealing the ordinance which gave us relief; but the mayor vetoed it. Our council deserves no credit for enacting this ordinance, as it was done under compulsion. Baltimore County was tired of the nuisance, and gave the city notice that unless it was stopped injunctions would be applied for. So, for a few months at least, we are free.

Yours, etc.,

MEDICUS.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MAY 27, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

Kidney from a case of hæmaturia in an infant.

DR. JOS. G. RICHARDSON presented the specimen, showing a curious natural injection of both the convoluted and straight portions of the uriniferous tubules with blood-casts, and remarked that the organ had been sent to him by Dr. M. B. Wright, of Cincinnati, Ohio, for microscopical examination; the case being one in which supposed pigment-flakes were found in the urine, and, he believed, also in the blood.

Dr. Wright was preparing a paper in relation to a series of these cases which had occurred in his hospital wards, for the forthcoming volume of the *Transactions of the American Medical Association*, but had kindly permitted the exhibition of this specimen, and furnished the following brief history of this and similar examples of the disease:

"In three or four days, or longer, after birth, a dingy appearance of the (child's) surface is observed. A curdy exudation is scattered over the mouth, the urine becomes dark, and soon a black sediment, in more or less quantity, is observed on the napkins. Some of the little patients have died within twenty-four hours, others have lived several days, and a few have recovered. The urine has been carefully examined chemically, with negative results merely."

Dr. RICHARDSON exhibited under the microscope a thin section cut in the axis of one of the pyramids of

the kidney, and stated that by tinting the contents of tubules, in similar preparations, with aniline or iodine (according to his method for the diagnosis of blood-stains), he had been able to demonstrate, and even accurately measure, the red blood-corpuscles of which they were composed.

Biliary calculi impacted in the left branch of the hepatic duct, attended with numerous cystic formations in the corresponding lobe of the liver.

Dr. R. M. BERTOLET presented the specimen, and furnished the following history :

"The specimens were obtained at the obduction of J. G., æt. 65, who was admitted into the Philadelphia Hospital in a semi-comatose condition upon May 20, 1875. No previous history of the case was obtainable; death ensuing in less than twenty-four hours. The clinical records are also very unsatisfactory. There was noted a moderate jaundice; high temperature; hurried respiration; hypostatic dulness, and vomiting.

"Autopsy.—The lungs were œdematous; bronchi filled with a frothy serum; heart slightly enlarged; the left ventricle hypertrophied; semilunar valves thickened; aorta atheromatous. The stomach presented several small patches of erosion and ulceration of the mucosa. Towards the pylorus the serous membrane was intensely injected, and had formed slight adhesions to the hepatic organ. The mesentery and the serosa covering the small intestines were likewise, at points, strongly injected, with here and there ecchymotic blotches. A very small quantity of flocculent serum was found in the abdominal cavity. There were no intestinal ulcerations. The spleen was flaccid, reduced to a soft, almost pulpy, mass, somewhat reduced in size. Kidneys were enlarged, soft, with cortical cloudy swelling of the convoluted tubules; the capsule separating very readily.

"The liver was of normal size, very much softened, with a slightly roughened capsule. In the left lobe a number of cysts were seen bulging above the level of the convex surface. Upon removing the viscus, one of these thin-walled cysts was ruptured, and a quantity of yellowish, creamy matter escaped into the abdominal cavity. Probably a similar escape of pus took place during life, thus giving rise to the slight peritoneal inflammation. Examining the liver more minutely, it is seen that the left lobe throughout presents numerous cystic patches, which communicate with one another. These cysts vary in size from a small pea to that of an almond. They are filled with thick, yellowish, turbid fluid, often mingled with numerous small, black and ochre-colored concretions. In the transverse fissure of the liver two cylindrical-shaped biliary calculi, each about the size of a marble, were felt completely occluding the left branch of the hepatic duct. When first removed, the outer layers of these concretions appeared soft and crumbly; the interior nucleus being much firmer in consistence and darker in color. There was decided thickening of the walls of the left branch of the hepatic duct; while at the same time the surrounding connective tissue was hypertrophied to such a degree as firmly to bind down these two calculi in their position in the hepatic duct. The index-finger could be readily inserted into this portion of the biliary tube after removal of the calculi. Immediately beyond the point of constriction ampullar-like dilatations began to be developed, attaining their maximum size, however, in the ultimate twigs of the biliary ducts towards the periphery of the organ, where the least resistance presented itself; there forming the numerous cystic distensions seen strewn over the entire left lobe.

"The gall-bladder was filled with a thin, yellowish secretion, free from concretions. The ductus communis choledochus, as well as the cystic and hepatic

duct, excepting its left branch, were found to be freely pervious.

"That these cysts, so closely resembling in appearance multiple hepatic abscess, are the resultant of the obstructions in the hepatic duct, is evident from the fact that they contain a greater or less number of small biliary concretions, and that their walls at points still present the remnants of a columnar epithelial lining. Further proof of such an origin is afforded, should any be required, in the microscopical appearances presented by the hepatic parenchyma even at a considerable distance from the cysts.

"The ultimate radicles of the bile-ducts are microscopically seen to be filled, at a few points actually dilated, with a fine granular biliary coloring matter. Often entire meshes are formed by these blackish lines of pigment in the biliary capillaries, each enclosing a single liver-cell; so that we have before us the finest picture of a natural injection of the gall-capillaries, excelling by far the famous Chronszczevsky artificial preparations. This pigment-matter marks not only the periphery of each lobule, but extends into the very centre of the acini; and here and there are also found single large fragments of gall-pigment lying between the hepatic cells. The latter are undergoing atrophic changes and disappear under the encroachments of the cysts. The hepatic cells in this specimen are unquestionably undergoing fatty degeneration, nor do I believe that this condition is entirely attributable to post-mortem changes, as Heinrich Mayer* claims. This experimenter succeeded in filling the biliary radicles with granular pigment, by ligating the ductus choledochus of various animals, but states that gall-stasis is not attended with fatty degeneration.

"Leyden,† on the other hand, concludes from his experiments that fatty infiltration of the hepatic cells does occur, which eventually leads to the atrophy changes.

"Wyss also noted the same phenomena where the hepatic duct had become closed by a carcinomatous nodule. It will be seen without further citation that there is a certain amount of conflicting evidence as to the processes which cause the dissolution of the secreting parenchyma, and I desire to place this case on record as one attended with decided fatty infiltration. It is generally admitted that the disappearance of the hepatic cells is not due to any solvent action of the retained biliary secretion itself.

"Without going into minute details, I can fully confirm the statement of Mayer, that the protracted stasis of gall causes an increase of the connective tissue of the liver, not only around the blood- and biliary vessels, but also in the centre of the lobule, where the sustentacular substance is increased to such an extent as to push the secreting cells asunder.

"The presence of calculi in the hepatic duct is an extremely rare occurrence. But a comparatively limited number are recorded, and of these many were kept back by the simultaneous filling of the common duct with calculi. Although in this specimen we find the concretions firmly clasped in position, yet upon their removal the biliary duct is not stenosed, and it is a difficult matter to explain, in the absence of new growths or other obstructions, how they came to be retained in this site, where the tube is decidedly much wider than any of its branches. No account seems to have been hitherto taken of the part that is probably played by the numerous blind ramifications in the transverse fissure of the bile-duct, now generally designated by histologists as *vasa aberrantia*.

"These receptacles for bile, which are quite numer-

* Wiener Med. Jahrb., 1872.

† Beiträge zur Pathologie des Icterus, 1866.

ous around the hepatic duct, may, in a yet undetermined manner, account for the arrestation of calculi in this site. Biliary cysts due to mechanical obstruction and stenosis of other portions of the gall-duct have been frequently recorded, and they seem to be often met with in sheep afflicted with distoma hepaticum. Rupture and escape of the cystic contents into the peritoneal cavity occasionally happen. The clinical picture presented by these cases is not yet as sharply delineated as desirable, and I regret that this well-marked case does not enable us to learn anything in this respect."

Medullary carcinoma of the left ovary.

Dr. J. EWING MEARS presented the specimen for Dr. W. W. KEEN, who furnished the following history:

"Mrs. A. S., æt. 46, of West Chester, was sent to me May 1, 1875, by Dr. McClurg. She began to menstruate at 15, and ceased at 44; was always regular, and did not usually suffer much pain. Married at 19, and her only child was born one year later. Has never had any uterine trouble. Her general health has been good until within two years. She first observed a swelling just above the right groin, about two years and a half ago, but it was not painful. In September last, after lifting a heavy basket, she observed that it had changed its place to the middle line. She had at that time considerable abdominal pain, and was sick some three or four weeks, but was not in bed. In October last, Dr. McClurg tapped her and removed five gallons of a greenish, viscid fluid, the operation being followed by considerable peritonitis. Her health was better after she was tapped, but the abdominal swelling again increased considerably. Of late she had not suffered much pain, but, from general discomfort, life was becoming a burden.

"May 1, 1875.—On examination, she is seen to be a thin, spare woman. Her abdomen measures, from the ensiform cartilage to the umbilicus, six inches; thence to the pubes, nine inches; between the iliac spines, sixteen inches; and the greatest abdominal girth, a little below the umbilicus, is thirty-three inches. The swelling is almost wholly below the umbilicus. A considerable amount of ascites is readily recognizable, beneath which the tumor is distinctly felt. The anterior parietal adhesions are limited to two irregular spots of about three inches square, the one surrounding the point of tapping, the other below it, and corresponding to a hard mass. The ascitic fluid flows around these adhesions, and reveals them easily. No adhesions existed laterally to the abdominal walls. The whole mass was, however, movable with difficulty either from side to side, or from below upwards. Palpation showed that the upper part of the tumor was distinctly cystic; the lower part, however, was solid. Anteriorly there extended from the pubes, obliquely to the right, a mass feeling somewhat like an elongated, irregular uterus; but the later examination of the uterus made it very doubtful that this was the uterus.

"The vaginal examination showed the os and cervix in about their normal position, size, and relations. The tumor could be felt behind the womb, but the cervix did not fade into the tumor, for a depression existed between them. The sound entered the uterine cavity upward, and somewhat to the right, two and a half inches.

"The uterus was scarcely movable at all independently, and movement of the tumor communicated motion to the uterus. The tumor could also be felt by the rectum, and its general pelvic examination left no doubt that the pedicle was very short and the adhesions probably pretty firm, but not very extensive.

"May 20.—By the aspirator I drew off a small quantity of the fluid for examination. I punctured the cyst through the adhesions, so as to avoid the peritoneal

cavity. The fluid was purulent-looking, and showed on examination some compound granular corpuscles and a few blood- and pus-cells; but the morphological element was mainly the distinct ovarian cell.

"May 22.—The tumor was removed at St. Mary's Hospital, in the presence and with the assistance of my colleagues, Drs. Grove, Schell, and Mears, and Drs. McClurg, Stewart, Porter, Griffith, with several others. After tapping the main cyst I found that the lower mass was too solid for any further diminution in size, and my incision had to be extended from the umbilicus six and a half inches downwards nearly to the pubes, to admit of its removal. The parietal adhesions were easily broken up; a few were found above and behind, to the intestine and omentum, and the mass was then turned out of the abdominal cavity. It was so large and solid that it hid everything below its mass, and I was obliged to tie its large base with a stout ligature, and then remove the greater part of the tumor at once, by cutting through its substance. Having done so, the base of the tumor (for it could not be called a pedicle) was found to be attached directly to the uterus, the rectum, and the left side of the pelvis. The parts of the tumor which had been left were now removed. Three large stout ligatures were passed around the broad attachments, two at the uterine and one at the pelvic attachments. These secured some large vessels. Considerable trouble was caused by these vessels and numerous smaller ones, so that eight ordinary ligatures were required. These were cut off short, but the three large ones were brought out of the abdominal wound. The attachments were touched with Monsel's solution, and the wound was closed by eight silver-wire sutures. The operation lasted two hours.

"The tumor consisted in its upper portion of one large cyst, containing about four pints of fluid like that before described, besides two or three quite small cysts. The inner surface of the large cyst was coated with soft, almost grumous papillary growths, numerous detached masses of which made up a sediment in the fluid. The lower part was quite a hard solid mass, divided by distinct septa of connective tissue into smaller masses, which could be peeled out of their loculi. These smaller masses were whitish in color, and again subdivided into still smaller similar masses.

"She was placed in bed with some hot-water bottles, though she was not very cold, and one-fourth grain of morphia was given hypodermically. In a short time she became conscious, and reacted well, though vomiting occurred occasionally. Nothing was given for three hours, but then beef-tea and milk-punch in small quantities were given every hour. Her pulse in the evening was 124, and temperature 101.2°. Another one-fourth grain of morphia was given to produce sleep. She suffered no pain.

"May 23.—In the morning her pulse was 126; temperature 100.8°. She had not slept any, had rejected the beef-tea utterly, but retained the punch. There was no pain, but the belly was a little tender. She passed a small quantity of water. Her general condition was much depressed. I continued the punch and ordered broken ice and a cup of iced tea.

"In the evening her pulse was 144, and very weak; her temperature 101.8°; her belly tender. A little oozing of bloody serum had taken place during the day. She was bathed in perspiration, was restless and despondent. From this time she gradually sank more and more, and died at 8 A.M. the next morning, May 24.

"Autopsy, May 24, at noon. The wound was well united throughout, except where the ligatures emerged. At each ligature there was a little pus. The intestines were all glued together with lymph of recent formation below the level of the umbilicus. At this level the omentum was attached to the belly-wall transversely,

and divided the main peritoneal cavity into two parts. In the upper the evidences of old inflammation and its resulting adhesions were seen; in the lower the recent inflammatory changes, the results of the presence of the tumor and the operation. No hemorrhage had occurred after operation.

"The uterus and right ovary were removed, with a portion of the rectum. The tumor was found to have been attached to nearly the whole of the left half of the uterus laterally and posteriorly, and to the rectum in Douglas's cul-de-sac. From this rectal attachment and deep on the posterior surface of the uterus the troublesome hemorrhage had taken place, and also from the pelvic attachment of the left broad ligament, which was the pelvic attachment. The right ovary was somewhat enlarged, and had contracted some adhesion to the pelvis.

"All the specimens are deposited in the Museum of the College of Physicians.

"Dr. J. G. Richardson kindly examined the specimens for me, and reports as follows:

"Scraping the surface of a fresh incision into the ovarian tumor you left with me yielded an abundant milky juice, containing multitudes of rounded, oval, caudate, and multiangular cells, with large nuclei. Thin sections from the growth exhibited similar cells heaped together in the alveoli of a loose but rather abundant struma, the individual cell-elements being without intercellular substance. The tumor seems, therefore, to be a rather hard variety of encephaloid or medullary carcinoma.

"The right ovary contained a dark-brown fluid, in which compound granular corpuscles, plates of cholesteroline, and "Drysdale's ovarian cells" were abundant. Its internal wall, on incision, displayed a peculiar plicated arrangement, strikingly analogous to that of the *corpus luteum* of pregnancy."

Dr. MEARS said he had examined the fluid and did not find in it the so-called ovarian cell in such numbers as Dr. Keen. He thought he had at times been able to diagnose cancer of the ovary by examination of fluid drawn from the abdomen. In this case, however, he was unable to do so, but had concluded that this was a multilocular cyst, in which suppurative had occurred. The discovery by Dr. Keen of the so-called ovarian cell in such large quantities in the fluid derived from this case by tapping, would seem to deprive this cell of its pathognomonic character, since the specimen is pronounced by Dr. Richardson to be a true medullary cancer.

Dr. BERTOLET said that he would refrain from saying anything about the so-called "ovarian cell," as being a matter still held *sub judice* by a special committee of this Society, but he thought that, as a scientific body, it was well-nigh time that we should drop allusions to and discussions about "cancer-cells," of which such frequent mention had been made. Cancerous tumors could not be diagnosed by simply examining the juices or rough scrapings, but could only be recognized by careful section and examination of the cells in relation to the stroma. The mere presence of a greatly and variously altered epithelium did not suffice to distinguish a carcinomatous growth from a benign adenoma; and many other species of tumors, like a simple retention-cyst, may present us with as many varied forms of cell-growth. The alveolated connective-tissue stroma is as important a factor as the "epithelial" element; either one, without the other, can never constitute a carcinoma. "Cancer-cells" are things of the past, and by us, also, should be irretrievably consigned to oblivion.

Dr. MEARS said he would like to ask Dr. Bertolet whether or not it was possible to diagnose cancer by examination of products obtainable during life.

Dr. BERTOLET replied that it was formerly alleged that cancer of the kidney could be determined by the presence in the urinary sediment of cells derived from the debris of the breaking-down growth. These various forms of cells—atypical epithelium—have now been abandoned as worthless for the diagnosis of renal cancer. Occasionally, it is true, fragments are discharged so large as to permit the recognition of an *alveolar structure*, when teased or cut in thin sections; but very often even such fragments are so far advanced in the necrobiotic process as to preclude such a recognition.

Dr. MEARS said he could recall at least one instance in which he had examined the fluid drawn from the abdomen and concluded that the case was one of cancer of the ovary. He was present at the operation, and presented the tumor to this Society. The specimen was referred to the Committee on Morbid Growths, and reported by them to be one of cancer. He was not as yet a believer in the existence of pathognomonic ovarian cell, and in the discussions in this Society he had expressed his disbelief in the existence of a distinctive cancer-cell. He fully recognized that the only proper method to determine the character of growths was to examine them in section, in order to study the relation of the cells to the stroma, but he felt sure that he had at times observed differences in the fluids in cases of ovarian disease which caused him to declare that the growth was not an ordinary cyst of the ovary, but a cancer.

Dr. JOHN ASHHURST, Jr., said that he thought that in our zeal for modern methods of investigation (the excellence of which no one could be more ready to admit than himself) we should not overlook the circumstance that cancer had, as a matter of fact, been frequently recognized in past years by the examination of scrapings, or of the so-called "cancer-juice," and that the investigations of Paget and other eminent pathologists had been almost entirely conducted in this way. While no one at the present day probably believed that there was any definite "cancer-cell," yet he thought the existence in any particular specimen of a great variety of cells of different sizes and characters, and of multifarious shapes, furnished probable, though not certain, evidence of the presence of cancer. It must be remembered, too, that even with the modern method of examining thin sections it was not always possible, without repeated examinations, to determine whether a given growth was of a carcinomatous or a sarcomatous nature, the same tumor, perhaps, presenting in most parts cells in constant relation with an intercellular substance (sarcoma), and yet, in certain places, nests of cells without any intercellular substance, when the growth would have to be called a *carcinomatous sarcoma*. Hence, while fully agreeing with Dr. Bertolet as to the superiority of the modern mode of studying the minute anatomy of tumors, he thought that, nevertheless, some information of practical value might be gained by examining scrapings or expressed fluid, and that it was not at all unreasonable, therefore, to suppose that a microscopic examination of the liquid removed by tapping might afford ground for a probable, though doubtless not a positive, diagnosis of cancer.

Dr. JOSEPH G. RICHARDSON said that he had now in his possession specimens of the discharge from a case of tumor under the jaw showing characteristic pearly globules by which he was enabled to make a diagnosis of epithelioma, without any examination of sections from the growth.

Dr. JAMES TYSON said he had recently more than once stated that in our modern methods of study of morbid growths he feared that the cell itself was being too much overlooked. Certainly no one would accuse him of claiming the existence of a specific cancer-cell; but at the same time, having had some experience in the older

methods of scraping and dissecting, as well as the more modern of hardening, staining, and section, he felt that there were certain peculiarities of the cells of cancerous growths considered *in toto*, the presence of which alone justified more or less suspicion of malignancy, in a clinical aspect, at least. These characters had been well described by his friend Dr. Ashhurst, and need not therefore be repeated. To those named might also be added the large numbers of nuclei, and the large size of the nuclei in relation to that of the cells themselves. Dr. T. did not wish, however, to be considered as advocating a study of the cells only, in making the diagnosis of cancer, but thought that both methods should be combined.

With regard to cancer of the kidney, he had to say that in a very large number of examinations of urinary sediment from cases of suspected cancer, and in some of which cancer was found to exist after death, he had never met any cellular or other elements whence the presence of this disease could be suspected. At the same time, he thought it not impossible that, in the disintegration of the organ, portions might descend to the bladder, which would aid or confirm a diagnosis, and he saw no reason to doubt the accuracy of observation by such observers as Beale, Hoffmann and Ultzmann, and others bearing on this point.

Dr. RICHARDSON thought it might at least be said that while the cellular elements in normal tissues grow according to a law of uniformity, those lying closely apposed resembling each other so long as constituting the same tissue, the cells of cancer grow in a *lawless* and irregular manner, resembling those of various other tissues as well as those in which they happen to be seated.*

Dr. BERTOLET thought that if Dr. Ashhurst were to have plunged his trocar into the cavity of the tumor of the breast which had been this evening reported by the Committee on Morbid Growths as a cysto-sarcoma, he would have drawn out many epithelial elements, while the chief mass is in reality a sarcoma. In fact, the contents of the large cyst had been examined microscopically, but were found to be mostly epithelium, and so destitute of any characteristic features that no allusion to their appearance was deemed called for.

The PRESIDENT referred to the interesting question of the microscopic appearances in the urinary sediment in cases of cancer of the kidney. He had had the opportunity of carefully examining the urine in quite a number of such cases, and had found the results most uncertain. The great variety of form and size of the cell-elements derived from the epithelial lining of the urinary passages (perhaps especially from the bas-fond of the bladder) simulate at times the cell-forms of carcinoma, and on several occasions when the autopsy showed merely pyelitis, suspicion of cancer of the kidney had been aroused in this manner. On the other hand, in cases of undoubted renal carcinoma the microscopic study of the urinary sediment gave entirely negative results.

It would seem as though much of this discussion turned upon the precise classification adopted for tumors and neoplasms. It is of course well known that this has varied much at different times, and notably since the earlier writings of Paget. There can be no doubt that the latter observer and others of his school

very frequently made a correct diagnosis of cancerous growths, so called under their classification, because the character of the expressed juice and particularly the cell-forms it contained formed an important feature in the characteristics of a cancer. But at the present time there exists an almost unanimous disposition to accept the classification of recent writers, in which cancer occupies a perfectly definite place, not in the least dependent on the character of juice that can be expressed from a cut surface, nor on the cell-forms present, but upon certain definite anatomical relations and arrangement of cells and intercellular stroma. According to this latter view it is, of course, necessary to employ the mode of examination which will alone afford a demonstration of these relations; and it is evidently impossible that a diagnosis can be made from the examination of fluid. It would seem that, with this conception of the question, the assertions made by Dr. Bertolet were well founded.

Vesical calculus of small size, producing marked symptoms.

Dr. JOHN ASHHURST, Jr., exhibited a vesical calculus, weighing less than two grains, removed by lateral lithotomy, from a boy, one week previously. The symptoms of stone in the bladder had existed only about three weeks, but had been unusually severe, several attacks of complete retention of urine having occurred, and the violent straining during one of these attacks having caused rupture of a blood-vessel in each orbit. The stone appeared to be of the uric acid variety, and there had been evidences of renal calculus before the development of vesical symptoms. Entire relief had been afforded by the operation.

GLEANINGS FROM OUR EXCHANGES.

SALIVARY CALCULUS IN THE PAROTID DUCT (*Edinburgh Medical Journal*, March, 1875).—Mr. Joseph Bell reports the case of a young lady, æt. 23, who for five months noticed a hard swelling in the left cheek, far back, nearly opposite the last molar tooth. There was not much pain except at times, when the tumor increased in size. There was much thickening of mucous membrane, and a constant discharge of pus into the mouth. There was also considerable fetor. The mucous membrane was red, swollen, and at one point a most malignant-looking fungous mass of granulations protruded. A gum-boil was supposed to have originated the mischief. Finding that all the pus came from one point, Mr. Bell passed in a fine grooved probe and succeeded in striking a hard mass at about the distance of an inch from the opening. Next day she was put under chloroform, and by slitting up Steno's duct to the distance of nearly an inch, it was found possible to dislodge and remove a pear-shaped salivary calculus, about the size of a hazel-nut. A very rapid recovery from all the symptoms ensued, and no deformity whatever remained.

TREATMENT OF ABSCESS OF BREAST BY COMPRESSED SPONGE (*New York Medical Journal*, June, 1875).—A patient had been suffering from mammary abscess for three weeks, but without any special benefit from treatment in checking the discharge of pus. It was decided to try the effect of compressed sponge, and for this purpose a sponge about ten inches in diameter was subjected to pressure and then applied by means of a bandage over the breast. After it had been in use forty-eight hours the abscess was completely cured. No pain was experienced by the patient, and in this case the opening in the breast was three inches above the de-

* [I have sometimes illustrated to my students the nature of this *lawless growth*, which I conceive to be so important a characteristic of the cells of cancer (as distinguished from Lebert's cancer-cell), by comparing it to that manifested in the development of the fungus producing the "smut" of our Indian corn. The relation held by the huge, distorted, ugly, and *lawlessly growing* diseased grains to healthy grains evenly ranged in a ripe ear of corn, is strikingly analogous to that subsisting between the large, deformed, and *lawlessly growing* cells of carcinoma, and the equal, symmetrical, and regularly arranged cellular elements of normal tissue, as, for example, the mammary gland, which the malignant tumor may invade.—J. G. R.]

pendent part of the abscess. In applying a sponge to the breast in this class of cases, it is found of advantage to compress it when dry. After it is applied to the breast and firmly secured in position, a little water is poured upon it to cause expansion and the necessary pressure.

CASE OF GONORRHEAL OPHTHALMIA WITH PECULIAR FEATURES (*New Orleans Medical and Surgical Journal*, May, 1875).—Dr. V. Grima reports a case of gonorrhœal ophthalmia, which, after the duration of a week, suddenly got well, together with the gonorrhœa. At the same time both of his knees, his elbow-joints, and his wrists grew swollen and painful. This lasted about ten or twelve days, and then got well rather rapidly, when his eyes again became painful, and, on examination, he was found to have rheumatic iritis. He finally recovered entirely.

OVULATION WITHOUT MENSTRUATION (*Chicago Medical Journal*, June, 1875).—A lady, married at 25, became pregnant, and was delivered in about ten months. The child was nursed twelve months. After this the mother menstruated six times. Her second child was nursed five months, until the baby died. Since then a third and a fourth child have been born, and a fifth pregnancy is now going on, each child having been nursed twelve months, yet during the past six years she has not menstruated once.

SALICYLIC ACID IN CHRONIC CYSTITIS (*New York Medical Journal*, June, 1875).—In chronic cystitis the bladder has been washed out with a solution of salicylic acid, containing one part in five hundred of water. The method has been to make four injections of one ounce each, every morning and evening. The acid not only removed the disagreeable odor of the urine, but, in a short space of time, freed it from pus. In empyema, a solution of the same strength has been employed with very valuable results.

ARE THERE ANY MEANS BY WHICH THE SEXES CAN BE PRODUCED AT WILL? (*New Orleans Medical and Surgical Journal*, May, 1875).—A series of observations were made by M. Thury, a French veterinary surgeon, with a view to discover, if possible, whether, and in what manner, the sexes could be produced at will in animals. The result arrived at was: that when the male had connection with the female in the beginning of heat in the female, the offspring were females; and when had towards the termination of heat, the result was a male. These results were published; and others who were engaged in raising animals pursued the same course of observations, and verified, by the results obtained, the truthfulness of the theory advanced by M. Thury from his observations. From observations made by medical men with regard to the development of sexes in the human subject, the result arrived at was that in a conception taking place at an early period after the menstrual flow had ceased, the product will be a female; and the farther removed from that period (always omitting four or five days anterior to the following monthly illness), the more likely is it that the child will be a male. We generally find that where there is a difference of fifteen years, more or less, between the ages of parents, with the father the elder of the two, the children are usually males; and this is accounted for on the ground that the father has not the same amount of desire as a younger man; some time usually elapses after the flow before copulation takes place.

CONVERSION OF BRUCIA INTO STRYCHNIA.—Two alkaloids—strychnine and brucine—occur in the various strychnos species. These, on superficial view apparently very dissimilar bodies, are, however, aside from their occurrence in the same species of plants, chem-

ically very closely connected. By an inspection of their respective formulæ, it appears that by the assimilation of four atoms of oxygen and the separation of two molecules each of water and carbonic anhydride, brucine can be transformed into strychnine. This is effected by gently treating brucine with four or five times its weight of diluted nitric acid. After the effervescence of carbonic anhydride has ceased, the deep-red solution is concentrated, treated with potassium hydrate in excess, and shaken with ether. The ethereal solution, on spontaneous evaporation, yields a red-colored mass containing a red pigment, a yellow resin, and a base. By recrystallization, the latter was obtained in a pure state, and found, by its excessively bitter taste and all of the other characteristic reactions, to be strychnine. The transformation of brucine into strychnine is not only a remarkable fact in itself, but is also highly important in a toxicological view, as it again points out the great caution that must be exercised in such investigations where oxidizing agents are employed.—*T. L. Sonnenschein*, in *Pharm. Zeitung*; *Pharmaceutical Gazette*, July, 1875.

MISCELLANY.

THE FORM OF LIGHTNING-RODS.—Knowing that electricity at rest always tends to diffuse itself on the surface, in fact, that it always *confines* itself to the surface, it became at an early period a question whether electricity in motion did not follow the same law. Pouillet determined the question in a very ingenious manner. He took a cylindrical wire of a certain size, and measured the resistance which it offered to a current of electricity. He then rolled the wire out flat and measured the resistance again; it was found to be the same, although it is evident that the extent of the surface of the conductor was by this means greatly increased. Other experimenters have determined the question by different methods, but always with the same result. The committee of the French Academy, which included Becquerel, De la Rive, Pouillet, and others, adopted a solid square bar as the best form for lightning-rods; and Sir William Snow Harris, though often quoted as favoring rods which present a large surface, says, "Provided the *quantity* of metal be present, the form under which we place it is evidently of no consequence to its conducting powers, since it would be absurd to suppose that a mass of metal, under any form, did not conduct electricity in all its particles; indeed, we know that it does so."—*Prof. John Phin*, in *Popular Science Monthly* for August.

DR. EUGENE PENDLETON describes in the *Medical News* the case of the most unkillable man on record. He fell sheer 258 feet by actual measurement, and suffered only such trifling injuries as concussion of the brain, broken ribs, fracture of the radius, and dislocation of the humerus, downwards and backwards. About twenty-four hours afterwards, all symptoms of concussion passed off, but a severe attack of pneumonia followed, from which he made a good recovery, and is now as well as ever.

MEDICAL LEGISLATION.—The *Medical News*, in reply to the desire of the *New York Medical Record* to know "what our medical brethren of Pennsylvania have gained by this law," says,—

"When our cotemporary will inform us what protection lambs ever received from wolves, we will be enabled to gratify his desire for information.

"Lambs, guided by *instinct*, fly from the wolves, but medical men are supposed to be influenced by a higher faculty,—*reason*. This prompts some of the well-meaning but inexperienced among them to seek assistance from our political legislatures, and they obtain such protection as the poor frogs in the fable obtained when they prayed to Jupiter for a king to govern them: they got King Stork."

OF M. Démarquay, the noted Parisian surgeon, who recently died of cancer of the stomach, the Paris correspondent of the *British Medical Journal* says,—

"The name of Démarquay is familiar to the medical world, as he not only distinguished himself by his writings, which proved him to be a *savant* in the true sense of the word, but was also one of the ablest and most practical surgeons of the day. M. Démarquay was surgeon to the 'Maison Municipale de Santé,' more familiarly known as the Maison Dubois, where he had made himself very popular. He was far above political influences, which is a rare thing for a man of his position in France, so that he had none but friends in the ranks of all parties. This he showed during the siege of Paris, and subsequently during the Commune, when, as surgeon and one of the founders of the 'Ambulance de la Presse,' he rendered the most unreserved and signal service. M. Démarquay was a member of the Academy of Medicine, and, had he lived, would doubtless have one day taken his seat at the Institute. His professional services were rewarded by the State by promotion to the dignity of Commandant of the Legion of Honor. Born of poor parents, M. Démarquay died a millionaire. He was never married, and, consequently, bequeathed a portion of his large fortune to his poorer relations, and the remainder was distributed as follows: £4000 to the Paris School of Medicine for the foundation of an annual prize; £400 was reserved and made over to one of his friends and disciples for the purpose of putting together and publishing his loose manuscripts."

NEW PROPERTY OF GLYCERIN.—R. Godeffroy, on examining a chemically pure glycerin, found that when heated to 302° Fahr. it took fire, and burned with a steady, blue, non-luminous flame, without diffusing any odor or leaving a residue. The glycerin had the specific gravity 1.2609. This property enables glycerin of lower specific gravity to be burned by means of a lamp-wick. —*Medical Press and Circular*.

A REMARKABLE CENTENARIAN IN IRELAND.—The registrar of the Emly district, Tipperary, reports the following case: "The death of a centenarian," he says, "has been registered in my district during the quarter. She was a woman known in Emly by her maiden name,

Nance Lee; she has been registered as 108 years of age, but I have reason to know, from a family tradition concerning her, that her age was 111 years. During her youth she was gifted with wonderful bodily strength and activity, and as a girl used to follow across country a pack of black-and-tan beagles kept by a neighboring gentleman. For forty years of her life she acted as a carrier of bread between Tipperary and Emly. She used to carry all her goods in a bag on her back, and thus heavily laden she used to traverse daily sixteen miles. Up to the last she was strong and in perfect use of her senses, and she walked to and from the parish chapel the Sunday before she died."—*Medical Press and Circular*.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JULY 20, 1875, TO JULY 26, 1875, INCLUSIVE.

JANEWAY, J. H., ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 150, A. G. O., July 23, 1875.

AINSWORTH, F. C., ASSISTANT-SURGEON.—To report to the Commanding General, Department of the Columbia, for assignment to duty. S. O. 147, A. G. O., July 20, 1875.

BROWN, P. R., ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 147, c. s., A. G. O.

The following named Assistant-Surgeons (recently appointed) will report as follows for assignment to duty:

TAYLOR, B. W., in person, to the Superintendent United States Military Academy, West Point, New York, for temporary duty.

WORTHINGTON, J. CH., by letter, to the Commanding General, Military Division of the Atlantic.

COMEGYS, E. T., by letter, to the Commanding General, Military Division of the Atlantic.

REED, W., in person, to the Commanding Officer, Willet's Point, New York Harbor, for temporary duty at that post.

KILBOURNE, H. S., by letter, to the Commanding General, Department of the Missouri.

MERRILL, J. C., in person, to the Superintendent Mounted Recruiting Service, for temporary duty at St. Louis Barracks, Mo.

HALL, W. R., by letter, to the Commanding General, Military Division of the Atlantic.

BARNETT, R., by letter, to the Commanding General, Department of the Gulf.

TORNEY, GEO. H., in person, to the Commanding General, Military Division of the Atlantic, for temporary duty.

CRAMPTON, L. W., by letter, to the Commanding General, Department of the Gulf.

WOOD, M. W., in person, to the Commanding General, Department of the Platte.

TAYLOR, M. E., by letter, to the Commanding General, Department of the Gulf.

NEWLANDS, WM. L., by letter, to the Commanding General, Department of California.

SMITH, ROBERT E., by letter, to the Commanding General, Department of the Missouri.

SHANNON, WM. C., by letter, to the Commanding General, Military Division of the Atlantic.

TESSON, L. S., by letter, to the Commanding General, Department of the Missouri.

SPENCER, WM. G., by letter, to the Commanding General, Department of the South.

ROSSON, R. L., by letter, to the Commanding General, Military Division of the Atlantic. S. O. 147, c. s., A. G. O.

WORTHINGTON, J. CH., ASSISTANT-SURGEON.—Assigned to duty at Fort McHenry, Md. S. O. 143, Military Division of the Atlantic, July 24, 1875.

COMEGYS, E. T., ASSISTANT-SURGEON.—Assigned to duty at Fort Wadsworth, New York Harbor. S. O. 43, c. s., Military Division of the Atlantic.

TORNEY, G. H., ASSISTANT-SURGEON.—Assigned to duty at Fort Wood, New York Harbor. S. O. 143, c. s., Military Division of the Atlantic.

SATURDAY, AUGUST 7, 1875.

ORIGINAL COMMUNICATIONS.

ATHEROMA.

BY J. MILNER FOTHERGILL, M.D. EDIN.,

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THOSE changes which go on in the coats of blood-vessels, and are denominated atheroma, or endarteritis deformans (Virchow), form a most important part of pathology, and are also of equal importance when considered clinically. Of recent years much light has been thrown upon this previously dark piece of pathology, and from very hazy and erroneous views in the past we now possess a pretty distinct knowledge of the nature and causation of atheroma. For the initiation of our present knowledge we are indebted to Virchow. By his observations as to the method of growth of parenchymatous inflammations and of the slow growth of pathological connective tissue in various organs, the portal was opened and a path revealed which led directly to the correct interpretation of chronic changes in the walls of blood-vessels.

The morbid change known as atheroma consists of a growth of connective tissue beneath the tunica intima. At first there is but a slight thickening of the arterial coat, and the lining of the vessel is smooth and unaffected. In time, however, the tunica intima is involved, and the surface is very level or puckered. This morbid change may either be localized or general, according to circumstances. In the one case aneurism is the common consequence of the disease; and one part of the arterial system being diseased, the blood-pressure within the elastic bag—for that is what the arterial system actually is—distends or ruptures the affected part, and then there is a bulging of the external coat of the vessel. It does not follow that there shall have been any actual ulceration in the atheromatous patch: some unusual distention, either from a general rise in blood-pressure, or more often some effort impeding the flow in the diseased vessel, or some blow, rupturing the weakened walls, may occasion an aneurism. It is a disputed point whether or not an aneurism can arise in perfectly healthy blood-vessels. In the great bulk of cases, however, there is no doubt that the structural integrity of the arterial walls has been affected. It is at points of flexion, as the ham and the axilla, that this change is most frequent in an arterial system generally sound, or at points exposed to strain, as the outside of the aortic arch.

These localized atheromatous changes are less interesting than is general atheroma, except so far as they point to strain as the great cause of this growth of connective tissue in arterial walls. The evidence they thus furnish as to the causation of atheroma is invaluable. The researches of various writers, English and foreign, have collected together such a bulk of testimony as to the association of

atheroma with strain, that the subject of atheromatous change is no longer a doubtful one. The most striking illustration of the cause of this change is furnished by the fact that the lesser or pulmonic circulation is never, or almost never, the seat of such change so long as the mitral valve is healthy and competent, and the circulation in the lungs unimpeded. When, however, this valve becomes diseased, the blood-pressure in the pulmonic circulation rises, and a parenchymatous inflammation is instituted, which is found alike in the pulmonary artery and in the lining membrane of the left auricle. A thickened condition is found in all the coats of the blood-vessels, from the little festoons of atheroma in the pulmonary valves to the lining of the muscular chamber behind the lesion.

Strain leads to growth, and that growth is usually excessive and ill regulated, and consequently distorting. It need not necessarily be so, however. In a most interesting case recently reported by Dr. A. Wynne Foote, of Dublin, where old-standing interstitial pneumonia had led to extensive changes in the right heart, there was no atheroma. The pulmonary artery was as large and thick in its walls as a normal aorta. The pulmonary valves were also changed, being hypertrophied, and possessing corpora arantii, but free from valvulitis. The right ventricle was hypertrophied and dilated.

In this case the hypertrophy of the ventricle was accompanied by growth in the valves and arterial walls,—a corresponding growth, indeed, but so exquisitely balanced that there was really abnormal tissue-growth which had not run into disease. This case is most instructive. It demonstrates that other parts of the vascular system than the muscular can grow and increase in strength by development of normal histological elements. Hypertrophy of the muscles is accompanied by other tissue-growth until all the parts are strengthened. Unfortunately, however, this development of connective tissue is not often so neatly apportioned to the increased demand in the part as in the case just quoted; and so we have valvulitis and endarteritis deformans. The growth becomes excessive, and is not sufficiently well regulated, and then it becomes disease. It is but normal nutrition run riot, rather than a morbid process *per se*.

What course, however, that growth of connective tissue will take depends very much on its environment and the condition of the system in which it occurs.

Ere proceeding, however, to consider the circumstances under which atheromatous growth becomes itself degenerate, it will be well to consider its production and origin.

General atheroma is most commonly found in the subjects of chronic Bright's disease, especially where the morbid change affects the circulation chiefly. The effects of imperfect blood-depuration are felt very variously by different individuals. One will have articular gout; another will have gouty bronchitis; a third, eczema; a fourth, muscular rheumatism; a fifth, indigestion; a sixth, neuralgia,—all as the consequences of lithiasis, or blood charged with

excessive nitrogenized waste. According to the diathesis of the individual and the circumstances of the person, or of excessive use of any part, will be the outward manifestations of the one causal condition,—lithiasis.

In some families the circulatory system is ever involved; in others, again, different parts are affected, but the circulation remains unimplicated. Why this variation should occur is yet unknown,—is perhaps unknowable. Very commonly the circulation is affected as one of the outcomes of kidney-disease.

Thanks to the observations and investigations of Traube,* George Johnson, Grainger Stewart, and others, the relations of these morbid changes are well understood, and form the most complete pathological process with which we are yet acquainted.

It can be briefly described thus: First comes imperfectly depurated blood; secondly, arteriole spasm; and thirdly, a rise in the blood-pressure. This last can be seen in a sphygmographic tracing long ere it can be recognized otherwise. The consequence of the persisting arteriole spasm is hypertrophy of the muscular coat of the arterioles, by which the high blood-pressure is maintained. This rise in the blood-pressure obstructs the blood-flow from the ventricle in its systole, and hypertrophy of the left ventricle follows (in some cases, chiefly in women, the hypertrophy is blended with dilatation). Betwixt the two hypertrophied muscular ends of the arterial system the pressure within the elastic arteries is heightened very markedly, and then the over-distention (*überspannung*) leads to the growth of connective tissue in the elastic arteries. That growth of connective tissue is atheroma.

Along with such atheroma we commonly find aortic valvulitis. The heightened blood-pressure and distention of the elastic arteries produces a stronger arterial recoil, and the aortic valves are closed violently, and consequently valvulitis ensues. The loud and accentuated aortic second sound so produced is insisted upon by German writers as one of the most important indications of chronic renal disease (Rosenstein, *Nierenkrankheiten*, zweiter Auflage, 1870). It will generally be found along with rigid and atheromatous vessels, a well-sustained pulse, and the general systemic indications of chronic Bright's disease. The tortuous temporal artery, so often found under these circumstances, appeals to the eye at once, and the hard and elongated radial artery is equally suggestive to the touch. The persistent high arterial tension has produced a general growth of connective tissue in the arteries, which are in time rendered rigid and brittle by the progress of the morbid change. In consequence of the high blood-pressure and the changes in the arterial coats, apoplexy from rupture of one of the intracranial vessels is very apt to occur. Constantly do we find apoplexy occurring under such circumstances.

But in time the scene changes, and a new set of

conditions is instituted. The general atheromatous changes are more pronounced at points and parts that are the seat of unusual strain. The coronary vessels of the heart become specially affected from the strain to which they are subjected by the recoil of the highly-distended aorta. Springing as they do from the base of the aortic column, they are subjected to the full force of the aortic recoil, and the special distention, added to the general high blood-pressure, produces decided atheromatous changes. This leads to consequent imperfect nutrition, and in time the structure of the hypertrophied heart becomes undermined by molecular necrosis, denominated fatty degeneration of the heart. The different muscular fibrillæ become broken down into a row of fat-cells, in advanced cases. As a consequence of this change, sudden death from asystole is common in the subjects of advanced atheroma. The growing weakness of the decaying heart, however, lessens the liability to arterial rupture, and consequently fatty degeneration has been said to be in so far a preservative lesion.

Attacks of angina pectoris, more or less perfect, are commonly found under these circumstances, and are due to sudden rises of blood-pressure (Lauder Brunton) before which the ventricle falters and not rarely fails. These observations of Brunton, that led to the employment of nitrite of amyl, which dilates the terminal vessels and lowers blood-pressure, mark a new era in medicine, and point the way to the successful palliative treatment of a large class of cases hitherto intractable, because we knew not their pathology and the means of relieving them.

Dr. Moxon, in a remarkable paper on the Nature of Atheroma in the Arteries (*Guy's Hospital Reports*, 1871), gives a plate illustrating the morbid changes. I here copy the letter-press accompanying it.† “Fig. 1. Longitudinal section through a portion of the thoracic aorta, showing a diseased patch. In examining this there are seen, 1, the outer coat swollen, and at the confines of and throughout the diseased patch becoming indistinguishable from it; it blends with the tissue around; 2, the middle coat traced up to the patch, divided into shreds, and spread out in the thickened patch, reappearing in flecks on the section here and there; the change in the middle coat is rather abrupt; 3, the internal coat continued over the patch, rather thickened, pellucid, and bluish in color.

“Fig. 2 shows a part of a thin slice from the section shown in Fig. 1, examined with one-fifth inch objective. *a*. Deep part of the inner coat, composed of fibrillar-looking substances (edges of laminae for the most part). In the part near the middle coat are numerous corpuscles. *b*. The line marking the commencement of the middle coat. This still is composed of elastic fibres, but beneath this, at *c*, corpuscles in great numbers separate the fibres into patches. *d* shows muscular fibre, still persistent; and *e*, elastic fibres, likewise persistent, among crowds of the inflammatory corpuscles; *f*,

* Traube's views will be found in an inaugural dissertation by Jacob Szostakowski: Ueber atheromatöse Degeneration der Arterien bei Nierenentzündung, 1869, Berlin.

† The description is such that a vivid impression is created without the aid of the plates.

fatty degeneration of the elastic fibres; and *g*, of the muscle-cells. At *h* a relation of the corpuscles to the vasa vasorum appears to exist."

This gives the microscopic condition of well-developed atheroma very completely, and the relations of the new growth to the normal tissues are well shown.

When this atheromatous change commences in a localized form, at first it appears as white opaque patches of an irregular circular form, single or several aggregated, rising a little from the surface of the inner lining of the vessel, but for some time the surface is smooth. When the atheroma is more general the aorta presents the appearance as if myriads of grains of rice of unusually small size had been placed under the tunica intima. As the disease advances, the whole arterial wall becomes involved, until the aorta feels like a piece of leather. The first or localized change is apt to occur at points exposed to much strain; the more general change involves more or less all the large vessels.

The progress of the atheromatous process is very different in various individuals. Thus, in one the localized spots of atheroma will pass from a semi-fluid mass of round and spindle-shaped cells into calcareous plates, by the deposit of lime salts, which plates may ultimately become loose, and wash off into the blood-stream; or a process of fatty degeneration in the new growth sets in, and then the mass becomes the purée of peas, a collection of fatty corpuscles, debris, and cholesterine scales, which is apt to wash away piecemeal into the blood-current, leaving the atheromatous ulcer (*geschwür*). Around the aortic valves and the coronary vessels the cell-growth is apt to form excrescences which, becoming infiltrated with lime salts, form little, rough, mortar-like masses, or the valves become themselves stony.

Similar changes go on in the more general form, and the morbid process may result in a general calcification of the diseased vessels, until the arteries are not unlike so many clay tobacco-pipe stems, in which almost all pulsation is lost; or in a condition of general thickening of the arteries, which, however, still preserve a soft feel, and are liable to undergo degeneration; or, again, merely a general hardness with elongation results.

These changes are clinically very interesting, especially in the latter two forms of general atheromatous changes. In those cases where the arterial coats are distinctly thickened, but still soft and fairly compressible, there is also commonly a greasy, degenerate skin, and an arcus senilis, with muddy, blurred outlines, and a cornea cloudy and hazy from the infiltration of fatty corpuscles through its structure. On the other hand, where the arteries are rigidly incompressible and exaggerate the ventricular impulse, with a square-headed pulse-curve and a slow rise, there is usually a dry, even harsh, skin, and either no arcus senilis, or it is sharp, well defined, and of a blue color, with a clear cornea. The difference in these two contrasted conditions is that the one shows a much more marked tendency to degenerative change in the altered vessels, while the other is rather the change almost normal to age.

Clinically and prognostically it is not unimportant to note which form presents itself. The calcified arteries are equally distinct, and mark a degeneration of kind other than fatty. In the intelligent comprehension of the progress of this morbid change, known as the atheromatous process, and in order to understand the various directions the morbid process may take, we must remember the influence of the environment, the circumstances under which this growth of pathological connective tissue shows itself. The results vary from the scars of Dittich to the formation of dissecting aneurisms from the atheromatous ulcer, according to the circumstances of each case. When we remember that this morbid process is essentially chronic, extending even to thirty years or more in some cases, we will not feel surprise that the diathesis, and still more the cachexia, of the individual will influence the progress of the growth. Consequently we will find that in a person of good constitution and quiet temperate life the atheromatous change takes a very different course from what it assumes in the intemperate and in those whose constitutions are broken down by syphilis. In the one the process is itself slow in its progress, and free from any tendency to undergo degenerative changes; in the other the morbid change is accelerated, and the new products readily undergo degeneration. Just as in one case the systemic changes are slow, and, as it were, long deferred, while in the other the system ages rapidly and degenerative tendencies are marked, so the chronic morbid process is identically affected.

In the first case atheroma may be marked, and yet be compatible with length of days, that is, with proper care; in the latter case some untoward outcome is to be apprehended. In the latter the liability to rupture in the degenerate arteries is great, especially if the heart be fairly strong, while also there is danger of the heart itself failing in such systems. In the non-degenerative atheroma the risk of rupture from the hypertrophied ventricle bursting the vessels is considerable, but if the individual escape this source of danger to life he often attains a very advanced age ere death takes place from cardiac syncope.

This gradual development of atheromatous change in the arteries, with hypertrophy of the left ventricle, leading to danger of apoplexy from rupture of some of the thin-walled vessels of the brain, and at a later period failure of the heart from fatty degeneration having undermined the hypertrophied heart, form a morbid process well marked, and commonly seen in the stalwart families of the north of England. Oppolzer, in his "Vorlesungen," in the chapter "unter dem atheromatösen Prozesse," gives gout, rheumatism, cancer, alcoholic intemperance, and syphilis as the conditions under which atheroma is most commonly found; but its course in the gouty and rheumatic yeomen, and its course in the broken-down syphilitic drunkards found in town populations, are very different. In the one, the change goes on rather as a chronic scarcely abnormal process; in the other, degenerative decay is almost the rule.

It has been too much the rule hitherto to regard

atheroma as a morbid process which was far beyond the reach of any remedy, curative or palliative. Certainly there is nothing with which we are yet acquainted that can melt the pathological connective tissue out of the arterial walls; the patient cannot be saturated with nitrate of baryta, which, if it would dissolve out the connective tissue, could not undo the changes wrought by its development in the affected vessels. It has been recommended, even in recent works, to use ioduretted frictions to remove the connective tissue out of the valves affected by valvulitis; but this involves, not faith, but credulity. There is no measure which can directly affect the morbid change. But it does not therefore follow that there exist no means by which this change may be affected, and profoundly affected, too, indirectly.

The first matter is to remember the natural history of atheroma, and its connection with persistent high arterial tension; because in lowering that arterial tension lies one most important factor in the treatment. The next is to bear in mind the influence exercised over its progress by any co-existing cachexia or habits. This will suggest the desirability of inducing the drunkard to alter his ways, and of saturating the syphilitic man with mercury and iodide of potassium. In many cases, where mercury alone is too depressant and lowering, it may be combined with iron, as the liquor of the bichloride with the tincture of the muriate of iron,—a combination of incalculable value in anæmic and broken-down syphilitic patients of all ages, enabling the mercurial course to be continued for lengthened periods. All conditions likely to encourage degenerative change in atheromatous vessels must be obviated according to the exigencies of each individual case.

The essential part of the treatment of atheroma is its avoidance as far as possible, and, if its arrest be unattainable, something may be done to delay its progress when it is thoroughly established. This, of course, applies rather to general than to localized atheroma. In order to approach this matter in an intelligent manner, it is necessary to remember the association of a high blood-pressure with the presence of nitrogenized waste in the blood in excess; either from imperfect depuration, or from the unnecessary and excessive consumption of nitrogenized food. The great portion of our urea, uric acid, and the other, the earlier products of nitrogenized waste, are not derived from tissue-disintegration, as is too generally supposed, but from the breaking up of peptones in the liver. By the liver peptones are split up into glycogen and nitrogenized waste. The amount of albuminous matter absolutely required for the daily repair of the tissues is very little. Not only is this known as a scientific fact, but it has been demonstrated in reality by the experience of Abbe Cornaro, and the Miller of Billericay; both instances where high vigor has been maintained for years on a diet containing but small quantities of nitrogen; indeed, a scanty diet altogether. True it is that these men lived, were healthy and hale, on a diet which would be almost starvation to some people: still, their prolonged and vigorous existence proves to a demonstration the small quantities of

nitrogen absolutely required for perfect tissue-repair. The glycogen can just as well be furnished from other than albuminous food. By regulating the diet, then, a decided effect can be produced upon arterial tension. This has been demonstrated by Parkes, of Netley, who found that the blood-pressure fell and the circulation became very calm in soldiers fed upon a strictly non-nitrogenized diet (*Lancet*, May 23 and 30, 1874).

The most important step, then, is to restrict the diet to the absolute needs of the system, to reduce the nitrogen to the lowest minimum compatible with tissue-repair. Every grain of nitrogen above that is unnecessary, and may be distinctly, indeed is, injurious: especially is this the case where there is chronic Bright's disease, and the imperfect action of the kidneys is not supplemented by the dry imperspirable skin so commonly found in such patients. Here the nitrogen must be reduced to the practicable minimum. The high blood-pressure with consequent fulness of the cerebral arteries which follows a highly nitrogenized diet, and gives that sense of energy which we all crave for, is undesirable in persons with commencing atheroma. In them the blood-pressure is high enough at all times, and an increase in it, synchronous with an excess of azotized waste in the blood, produces that cerebral explosiveness known as gouty irascibility, sometimes denominated "pure cursedness." In others of a lymphatic diathesis large quantities of nitrogenized food are indispensable to brain-activity; but then these persons do not suffer from atheroma. The diet should consist of fish, farinaceous foods, vegetables, and, if necessary, fat, in any or all of its forms.

The next step is to remember the form in which waste nitrogenized matter is most permanent, and in which it lingers longest in the system,—viz., as uric acid, free, or as a urate. Potash renders this substance freely soluble, and as urate of potash it readily finds its way out in solution by the various water emunctories of the body. Not only that, but potash, as a muscle-poison, exercises a decided effect upon the circulation, and lowers the blood-pressure, in some persons, most pronouncedly.* Consequently, in the high blood-pressure of a hypertrophied left ventricle and hypertrophied muscular fibre in the arterioles, potash is most serviceable. In persons with a tendency to atheroma, as shown by the sphygmograph long years ere otherwise recognizable, the constant use of potash is desirable; partly as a solvent of uric acid, partly as a vascular depressant. Its latter action may be aided by combining it with the iodide or bromide of potassium, with colchicum, aconite, or veratrum viride, according to the indications of each case. The bowels, too, should be kept freely open, and the practical utility of a mixture of sulphate of magnesia, potassio-tartrate of soda, in infusion of buchu, can only be estimated by those who have tried it. The idea here is to act upon the bowels, and in doing so to remember the connection of excess of lithates with imperfect action in the liver (Thur-

* See Botkin (of St. Petersburg), "*Des Maladies du Cœur.*"

chison); the buchu acting pleasantly on the kidneys. This combination is superior to any of the many and excellent mineral waters; especially when well diluted.

Such is the regimen indicated in the early stages of atheroma: it will delay changes that are inaugurated, and check to some extent the progress of the malady. When the latter stages are reached, and heart-failure is threatening, then digitalis or belladonna may be given. But the danger of bursting the degenerate arteries must ever be borne in mind. It is often desirable to join digitalis or squill to the potash in gouty conditions in persons with advanced atheroma and a weak heart, in order to obviate the depressing effects of the potash upon the circulation.

VULSELLUM FOR USING WITH THE ECRASEUR.

BY ALBERT H. SMITH, M.D.

IN a recent operation in which I removed the cervix uteri for malignant disease, with the galvano-cautery, I was particularly annoyed at my difficulty in passing the needles for transfixing the cervix. The mass of disease not only occupied the cervix itself, but also encroached upon the surrounding vaginal tissue, and passed up some half an inch into the body of the uterus. The patient had a rather small pelvic entrance, with rigid soft tissues. The passage of needles long enough to secure the whole of the mass to be carried through from one side of the pelvic cavity to the other was a matter of extreme difficulty, the constant wounding of the fingers with the points of the needles, passing through a broken-down cancerous tissue, being unavoidable. I used for the purpose needles with a large curve, straight ones, such as ordinarily used, being absolutely impracticable.

Having in use a large tenaculum, which Mr. Kolbe had made me for this particular case, the suggestion presented itself that if that tenaculum had a shoulder upon its curved angle, over which the wire could be hooked and secured, it would save at least the necessity of one needle; and, if four tenacula could be introduced in the same way, thus constructed, and then joined at their extremities, we would have an instrument of great use in such operations.

I accordingly set to work to devise such an instrument, and Mr. Kolbe has produced it for me. The great difficulty has been in getting a simple mechanism by which to unite the tenacula at their extremities, and, at the same time, enable the operator to tighten them up upon the mass after they are applied.

The accompanying cuts represent the instrument as constructed: A is the tenaculum with its shoulder for the reception of the wire; B the instrument complete, having in its grasp a ball to demonstrate its method of operation.

The four tenacula are made at their lower ends with one surface curved, the other two plane and approaching each other at a right angle, so that when

the four are put together after their insertion into the mass to be removed, they will form a cylinder to pass through a tightly-fitting aperture in the handle, and be secured by a screw-clamp. Thus the relation of the four tenacula will be preserved, and the whole will furnish a powerful vulsellum for traction.

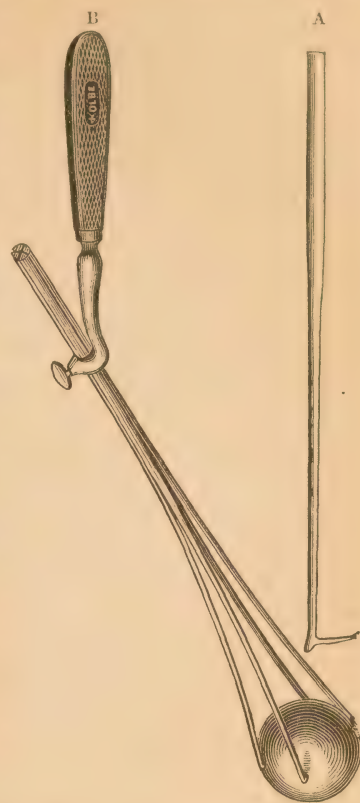
In applying this instrument the tenacula are to be introduced separately, either in the grasp of the fingers, or, in case of very narrow room for working, as in intra-uterine polypus at the fundus uteri, in the grasp of a strong needle-forceps. The ends are then brought together,—adjusted, and passed through

the hole in the handle, which is then slipped up upon them as far as it can be carried. Thus a powerful grasp is secured. The wire is then to be placed in the écraseur, and the handle of the vulsellum passed through the loop, which may then be carried on until it is passed over the shoulders of the tenacula and retained in position, being then ready for tightening. After the wire has made a sufficient groove for itself in the tissues to retain it in position, if the operator think it more convenient to dispense with the vulsellum it may easily be withdrawn.

I imagine any one who has attempted the removal of large polypi from the cavity of the uterus, even when well pedunculated, and much more when at all sessile in their character, has experienced the great difficulty in having the loop of the écraseur sufficiently secured upon one portion of the mass while he draws it around upon the opposite side for tightening it up, it being impossible to introduce more than one hand into the cavity at once. I think this instrument will be found to obviate the difficulty very greatly.

The mechanism for securing the tenacula seems to be defective; but if the instrument proves useful there are, no doubt, many with mechanical genius who can improve upon it.

A BUTCHER named Lerch, residing at Linden, near Hanover, has been condemned to two years' imprisonment for gross negligence. His offence was the selling of a quantity of trichinised meat, which caused the illness of about four hundred persons, and the death of more than fifty.



A COMBINATION OF THE CUTANEOUS AND MUSCULO-CUTANEOUS PLANS OF AMPUTATION.

BY D. HAYES AGNEW, M.D.,

Professor of Surgery in the University of Pennsylvania.

I HAVE recently employed a method of amputation which appears to me to possess advantages worthy of notice. In raising the integument from the deep fascia, after the old plan of the skin-flap, whether circular or oval, a large number of its vessels are necessarily cut, which tends to jeopardize the vitality of the flap. Again, in this operation, the muscles being divided circularly, it is impossible to secure an accurate contact of the surfaces; irregular spaces or cavities between the muscles and flap will remain, in which the discharges collect and interfere with the healing.

If the musculo-cutaneous method be adopted, the skin, from its greater elasticity, retracting more than the muscles, leaves the latter hanging below, thus requiring that they be either abridged with the knife, or tucked and crowded in, so that the stump can be closed. The plan which obviates all these objections is the one to which I refer, and consists in making two oval cuts through the skin, down to the deep fascia, on opposite sides of the limb, raising the integument only a short distance,—say three-quarters of an inch,—and then applying the knife at the junction of the skin-flap and the deep fascia, and cutting the muscles obliquely back to the bone, or bones, as the case may be; or, if transfixation is preferred, thrust the knife through at the angles of the tegumentary wound, and cut from within out. I find, however, the former the more convenient plan. The adjustment between the divided surfaces will be complete.

In the few cases in which I have performed the operation the union has been quick, and the form of the stump perfect. This method is adapted to any part of the fore-arm, arm, or thigh, and even the leg, as its details can be made practical on the posterior part of this portion of the lower extremity.

NOTES OF HOSPITAL PRACTICE.

EPISCOPAL HOSPITAL.

SERVICE OF DR. JOHN ASHHURST.

Reported by G. WINFIELD ZEIGLER, M.D., Resident Physician.

RUPTURE OF THE INTESTINES, FOLLOWED BY PERITONITIS, AND DEATH IN TWENTY-FOUR HOURS, WITH-OUT SIGNS OF EXTERNAL VIOLENCE.

JOHN G., æt. 49, spinner by occupation, was admitted into the surgical ward of the Episcopal Hospital on the evening of July 18, 1875, with the following history and symptoms:

At about 9 A.M. of the same day, he was knocked down and severely kicked on the abdomen by a man with whom he was quarrelling while in a state of intoxication. About twelve hours after the injury he was received into the hospital. I found him lying upon a stretcher, on his right side, with his thighs flexed upon his abdomen and his head flexed upon his neck, crying, and manifesting evidence of most excruciating pain. After his transference to a bed, neither Dr. William H.

Hawkes nor myself could detect any external marks of violence upon his person, excepting a small contusion upon the point of his chin.

His abdomen was very tympanitic and extremely painful to the touch, particularly on the left side. On auscultation, I could detect a gurgling sound on the left side over a line corresponding to that of the descending colon. His pulse was weak and rapid; tongue coated; respirations hurried and labored; skin clammy, and pupils rather dilated. Constant vomiting and severe retching were marked symptoms. He had retention of urine, and stated that he had not evacuated his bladder since early in the morning. There was extended dulness on percussion over the supra-public region, and the penis and urethral canal were so firmly contracted as not to admit of the passage of the smallest-sized catheter which I could obtain. The patient, during this time, and even up to the time of death, was in full consciousness.

The treatment when he first came in consisted in the administration of fifteen minims of laudanum; which was immediately rejected by the stomach. I next resorted to the hypodermic injection of one-fourth of a grain of morphia, which dose was repeated in fifteen minutes. A thin flaxseed-meal poultice was placed on the abdomen, and a hot mustard poultice over the epigastric region; hot fomentations were constantly applied over the hypogastric region. About an hour after this plan of treatment had been in operation, the patient began to quiet down, and remarked that he felt much better.

He complained of great thirst; milk and lime-water seemed to allay somewhat the irritability of his stomach. During the night he took about a pint of the mixture. At 11 o'clock P.M., ten minims of laudanum were ordered to be given every two hours until morning. At 2 o'clock the next morning his condition was about the same. I again endeavored to introduce a catheter, but with nearly the same result as before. No sooner, however, had I ceased my efforts than he passed spontaneously fully $\frac{1}{2}$ xii of urine. At 6 A.M. he complained of increased pain in the lower part of the abdomen. At 8 o'clock the vomiting had increased, and ten grains of subnitrate of bismuth were given. At 10 o'clock his condition was nearly the same, except that the abdominal pain was relieved somewhat. About half an hour afterwards his death occurred by sudden collapse, preceded by stercoraceous vomiting.

The post-mortem, which was made eight hours after death, by Dr. Maury, the coroner's physician, showed that the body was free from external marks of violence, except the small contusion which was observed upon his chin during life. The abdomen was distended and tympanitic; and there was a discharge of stercoraceous matter from the mouth. The peritoneal cavity was filled with an offensive, thin, yellow pus, mixed with a considerable quantity of fecal matter. The intestines were in a high state of congestion; and there was well-marked and extensive peritonitis. By carefully examining the intestines there was discovered in the ileum a small rupture about one-third of an inch in length, through which the contents of the bowels were escaping. The stomach was natural, and the lungs and heart were normal, except that there was some thickening of the tricuspid valves. The liver was slightly enlarged, and of a beautiful pale-yellow color,—a perfect specimen of cirrhosis of that organ. The skull was uninjured, and the brain-substance normal.

SIR WILLIAM WILDE, of Dublin, has been elected an honorary member of the Royal Academy of Science at Upsala, and a corresponding member of the Geographical Society, Berlin.

TRANSLATIONS.

COMMUNICATION BETWEEN THE BLOOD-VESSELS AND THE LYMPHATIC SYSTEM (Tarchanoff; *Centralblatt für Chirurgie*, No. 26, 1875; from *Gaz. Méd.*).—Tarchanoff, after making numerous investigations, has reached conclusions opposed to those of Arnold relative to the existence of a system of canals through which the blood- and lymphatic vessels inter-communicate. He has repeated the experiments of Arnold by first ligating the crural vein of the frog, and then injecting a solution of gelatine, colored with Berlin blue, into the aorta under a pressure of eighty to one hundred millimetres of mercury, and then observing what takes place in the vessels of the membranes between the toes. On the second or third day after ligation the blood-vessels are found dilated and strongly distended with blood; and their walls are at some points ruptured, and the orifices thus caused surrounded by extravasated blood. The matter which is injected makes its exit at the ruptured points, insinuates itself among the blood-corpuscles which are outside of the vessels, and forms a network of communicating stellate figures. Tarchanoff has never observed that the injected materials enter pigment-cells as described by Arnold, nor that there is any direct communication between the two systems of vessels, for the only communication between the matters injected occurs in the meshes of the connective tissue.

If the formation of extravasations of blood is prevented by washing out the blood-vessels with a solution of common salt after the injection, no determinate figures are met with, but only diffused coloration.

The system of canals for the conveyance of the fluids of the body which have been supposed to exist is, then, according to the views of this experimenter, only a series of artificial meshes due to the entrance of the colored injection between the blood-corpuscles.

W. A.

ELECTRO-PUNCTURE OF THE HEART (A. Hénocque; *Centralblatt für Chirurgie*, No. 26, 1875; from *Gaz. Hebdom.*).—After referring to the experiments made upon dogs by Vulpian, Hénocque alludes to the use of faradization of the heart with a view of arousing patients from the syncope of chloroform. Vulpian, by faradization of the heart of dogs, produced a complete cessation of action in that organ. The currents which were employed in these researches, both intermittent and continuous, were of but little intensity, and he concludes that with our present knowledge electro-puncture is too dangerous to be thus employed.

W. A.

BOULIMIA.—Dr. Lubelski reports (*Bull. Gén. de Thérap.*, No. 12, 1875) the case of a woman of 26, who was attacked during the earlier months of married life with certain nervous symptoms, at first supposed to be connected with pregnancy, the menses not having occurred for some time.

At the same time her appetite became insatiable. She ate from twenty to twenty-five pounds of meat per diem. The urine showed neither albumen nor sugar. The patient increased in size rapidly; after a few months she could no longer walk, and weighed about three hundred pounds. A singular toleration for toxic substances was shown. Treatment proved of no avail.

X.

THE INDICATIONS FOR TRANSFUSION.—A discussion on this subject took place at a recent meeting of the Société des Hôpitaux. M. Moutard Martin maintained that in many cases in which cures had been reported after transfusion, the same result would probably have taken place had the operation not been performed. To this

M. Féréol earnestly objected, and added that of the fatal cases reported by himself, life might have been saved in several had transfusion been performed earlier. M. Martin thought that the indications for transfusion should be distinctly stated. M. Buquoy stated that it was generally agreed that the first indication was anæmia from hemorrhage, and that transfusion was contra-indicated when the existence of an organic lesion had brought about constitutional anæmia. Intermediate cases, however, existed where the operation was worthy of trial.

SUDDEN DEATH FROM SYNCOPE SUPERVENING DURING AN OPERATION FOR THORACENTESIS (*Le Mouvement Méd.*, Nos. 27 and 28, 1875).—Dr. Ernest Besnier reports the following case. A stout woman, 43 years of age, was seized with severe pain at the base of the thorax on the right side, accompanied by fever, without expectoration. The appearance indicated the presence of a grave affection. On physical examination, some days later, signs of pleuritic effusion in the right side were observed, dulness, ægophony, etc. Blisters, digitalis, and diuretics were prescribed, and the patient became better. A few days after, she began to get worse again. Further examination showed signs of abundant acute pleuritic effusion, marked but not excessive dyspnoea, respiratory murmur normal everywhere except at the base, where there were fine subcrepitant rhonchi. The general condition was bad; pulse 100. The only symptoms which distinguished the case from an every-day one of pleuritic effusion were the severe pain and general aspect of the patient. Twelve days after the first examination, it was decided to perform thoracentesis. Everything being prepared, a trocar was introduced, and gave exit to a horribly fetid, sanious pus. Some twelve ounces of fluid had passed into the receiving vessel, when attention was suddenly called to the patient, who remained sitting bolt upright, with the eyes open, perfectly pale, and without making the least effort at respiration or displaying any pulsation at the wrist or heart. Every means was used to restore animation, but in vain; the patient was dead. M. Besnier discusses the cause of sudden death in this and similar cases at some length, and concludes that a manifest irritation is produced during thoracentesis in a region which is hyperæsthetic, and that this irritation in cases of exceptional debility may be the starting-point of arrest of the heart's action, an arrest which may become mortal either on account of cardiac disease or debility. M. Besnier alludes to other cases of gangrenous pleurisy, which he considers quite different from, as well as more severe than, the ordinary variety.

X.

CHRONIC AORTITIS.—The following is an abstract of the memoir on this subject read before the Académie des Sciences at a recent meeting by Dr. M. P. Jousset:

1. Chronic aortitis is an affection characterized anatomically by chronic inflammation of the tunics of the aorta. The principal lesions are atheroma, milky and cretaceous patches, thickening and loss of elasticity of the walls, and, finally, dilatation of the artery. The inflammatory character of these lesions has been demonstrated by microscopic examination. The endarterial inflammation may be propagated to the endocardium, and *vice versa*. The lesion in this case constitutes a cardo-aortitis. Concomitant lesions frequently observed are premature ossification of the peripheral arteries and sclerosis of the kidneys.

2. This affection presents itself in two forms: a painful angina pectoris, and a painless variety. The latter alone is discussed by M. Jousset.

3. Chronic aortitis is a common affection. It is continually mistaken for or confounded with an affection of the heart, or rather with an interstitial nephritis.

4. Chronic aortitis sometimes follows acute aortitis. The causes which favor the origin of the latter, alcohol, tobacco, coffee and tea, etc., are the same in both cases. All the patients observed by M. Jousset were gouty or had hemorrhoids, and were all above thirty-five years of age.

5. The principal symptoms are habitual dyspnoea, with occasional attacks of suffocation. The more severe attacks are similar to those of cardiac dyspnoea. The pulse is quickened, becomes small, and may even disappear. Cold sweat, and sometimes syncope, supervene. During the attack the respiration is convulsive and prolonged. Insomnia, loss of strength, and anaemia are other symptoms of aortitis; they lead to cachexia characterized by oedema, albuminous urine, and sub-delirium.

Death results from asphyxia, syncope, or uræmic accidents.

6. The physical signs are various modifications of the aortic sounds, the formation of a plateau in the sphygmographic trace, and increase of aortic percussion-dulness.—*Bull. Gén. de Thérap.*, No. 12, 1875.

X.

NEW METHOD OF TREATMENT OF CEREBRAL RHEUMATISM BY CHLORAL HYDRATE.—M. E. Bouchut remarks on this subject as follows: Cerebral or meningitic rheumatism is a grave form of this affection. Examination of the membranes of the brain reveals considerable venous stasis, with opaline infiltrations of the pia mater caused by numerous leucocytes. Ophthalmoscopic examination shows serous infiltration of the papilla and of the neighboring retina, with dilatation of the retinal veins, which represent similar alterations of the pia mater and brain. Cerebral rheumatism is announced by more or less violent delirium, terminating in coma, and by a sometimes very rapid asphyxia which may cause death in a few hours. In three cases of this kind a cure has been obtained by the aid of chloral hydrate, taken by the mouth, to the extent of forty or eighty grains in one or two doses closely repeated, so as to obtain an immediate relief from the agitation shown by the patient.—*Bull. Gén. de Thérap.*, No. 12, 1875.

X.

IRRITATION OF BOTH PNEUMOGASTRIC NERVES IN MAN (L. v. Thanhoffer: *Centralblatt für die Med. Wissenschaften*, 1875, No. 25).—On the 14th and 15th of April of the present year, a pupil of Von Thanhoffer permitted experiments to be made upon him, and compression of the right vagus was several times made either by the experimenter or by the patient himself. The pressure was applied by the index-finger of the left side at the inner edge of the sterno-cleido-mastoid muscle, on a line with the thyroid cartilage. Pressure properly applied over the nerve was recognized by the line made by the pencil of a sphygmograph on the right radial artery, and by the patient himself by the occurrence of a prickling sensation to which it gave rise.

Twelve such experiments, in which the pulse-lines were almost identical, showed that the results obtained from experiments on beasts are accurate, and that the pulse and action of the heart became slower, and that the heart indeed can be brought to a state of rest. The truth of the assertion of Ludwig, Hoffa, and others, that irritation of the vagus in dogs causes a diminution of the blood-pressure, was also established. In the experiments in which compression of both nerves was made, the sphygmograph was fastened upon the right arm, while the pressure was made by the thumb and forefinger of the left hand. In some of the experiments the pressure was probably imperfectly exercised, for the pulse-lines were not remarkable, but in the last the line was unique, and the experimenter was much astonished to find his pupil become suddenly speechless while

keeping up a spasmodic pressure upon the pneumogastric nerves. He continued staring with glassy eyes, giving no reply to the inquiries which were made, and it required considerable force to loosen the grasp of his hand upon his bent neck, and, when this was done, some time elapsed before there was a complete return of consciousness. He was at first unable to stand, and when taken into the open air staggered, and said that his head felt very heavy, and as if bound with an iron ring. This sensation of pressure was also felt in the whole body, and especially about the heart, and he had a chill, followed by febrile symptoms.

He retired early, slept soundly, and awoke the next morning with a severe headache, which, however, soon passed off, leaving him once more fit for work, but not at all disposed to renew the experiment, which had given such alarming results.

W. A.

TETANUS CURED BY CHLORAL (L. Papilland: *Centralblatt für Chirurgie*, No. 26, 1875; from *Gaz. Méd.*).—A railroad hand, aged 20 years, received a severe contusion of the last phalanx of one of his fingers, and in a short time was seized with a rigidity of all his muscular system, but which was especially noticeable in the muscles of mastication, to which attacks of convulsions were soon added. A solution of chloral of the strength of eight to two hundred was given in tablespoonful doses every hour until the cessation of the spasmodic seizures.

The patient took altogether seventy-two grammes of chloral, and at the expiration of twenty-two days had entirely recovered, with the exception of a certain amount of rigidity of the left arm. P. concludes that the internal use of the drug will suffice in every case, and rejects the proposition of injecting it into the veins.

W. A.

THERAPEUTIC NOTES.

TREATMENT OF ZOSTER BY INDUCED CURRENTS.—Dr. Fanque recommends the use of induced currents in the treatment of zoster, which is now generally admitted to be of nervous origin.

He recommends that the positive pole be placed upon the vertebral column while the negative pole is placed upon the affected portions of skin.

EMMENAGOGUE PILLS.—Take aloes, 1½ gr.; rue, savin, saffron, of each ¼ gr. To make one pill.

SOLUTION OF SALICYLIC ACID.—As this substance is somewhat insoluble in water, only one part being dissolved in three hundred of the latter, the following formula is useful when a stronger solution may be needed:

Salicylic acid, one part;
Phosphate of sodium, three parts;
Water, one hundred parts.

REDUCTION OF INDOLENT GLANDULAR SWELLINGS.—A writer in the *Irish Hospital Gazette* advises the hypodermic injection of from seven to ten minims of the dilute acetic acid of the British Pharmacopœia.

Indolent enlargements of the cervical glands which disappear slowly or not at all under the use of internal treatment and painting with iodine, are cured in a week or so by this method. Occasionally the effect is to cause atrophy of the enlarged gland, but more frequently suppuration is brought on, lasting for a week or ten days, and ending in a cure.

PHILADELPHIA
MEDICAL TIMES.
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The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

THE UNIVERSITY OF MICHIGAN.

THE medical faculty of this institution are placed in a very delicate position by the fact that some of them are required to aid in the preparation of practitioners of homœopathy. Prof. Sager, in a plain, manly letter, has already tendered his resignation as Dean of the medical faculty. At this distance we are, of course, unable to know exactly how the fermentation is working, but Prof. Sager states that he has been admonished officially and through the medical press "that for the liberty of expressing publicly views at variance with those of the honorable Board of Regents, yet in vindication only of the purity and prosperity of the old school in the Medical Department, I have exposed myself to their displeasure, and rendered myself obnoxious to their censure."

Prof. Sager may be sure of one thing,—that is, that he has the sympathy of his professional brethren, and that sooner or later the school which he has labored so steadfastly to support will reap the harvest of the present sowing. Such is the reward of twenty-five years' labor in medical teaching. Dr. Sager's letter leaves it doubtful whether he intends withdrawing absolutely from the faculty or not; but probably he contemplates so doing. During the present state of dissatisfaction it would hardly appear to be an auspicious time to make any changes in the requirements of students; but at a recent meeting of the Michigan State Medical Society Regent Rynd said that the policy of the regents

was to establish within two years at farthest a full three years' graded course of study and lectures obligatory upon all students graduating in the medical department, and that the requirements for admission into this department would at the same time be made equal to those for admission into the scientific department.

We have to thank an unknown correspondent for a marked copy of the *Buffalo Courier*, giving an account of the "Buffalo Free Medical and Surgical Dispensing Association." The account is preceded by a large sensation heading, and in it the names of the various specialists, along with their particular callings, are displayed in a manner worthy of Helmbold. Perhaps there never was a more palpable instance of the method in which the profession is as it were devouring itself, or, to speak more correctly, of the injury being wrought by the craze of individuals to get experience and make reputation as specialists. We are told with great satisfaction, by the writer of the account, that the free labor of the Association has enabled the city authorities to reduce the aggregate salaries of district physicians from \$13,000 to \$3000. Is it less a violation of the spirit of the Code of Ethics to steal from a brother practitioner a patient by underhanded means, than to rob him of his salary by doing the same or equivalent work for nothing? If this thing be allowed, it seems to us that the profession will fall below the level of an honest business; since even in commercial circles it is hardly thought honorable to destroy a weaker competitor by selling goods for nothing.

A MIDWIFE—Elizabeth Marsden—is now undergoing penal imprisonment in England for having conveyed puerperal fever to her patients with fatal result. It appears that she was warned that she was spreading the disease, but refused to pay any heed. The London *Lancet* affirms that the general medical profession is much divided in opinion as to whether she "is a martyr or a justly-punished criminal."

RED TAPE AND A STATE RELIGION.—According to the correspondent of the *Pacific Medical Journal*, a woman was recently refused by the Berlin authorities permission to follow the avocation of a prostitute because she had no certificate of confirmation.

ACCORDING to the *Wiener Medizinische Presse*, July 11, cholera at the latest advices (June 17) was epidemic in Damascus, Hamah, and Aleppo.

CORRESPONDENCE.

TRANSFUSION.

UNIVERSITY OF STRASBURG, June 28, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES :

DEAR SIR,—The importance of the subject of transfusion, no less than the frequency with which this operation has been performed of late, and the admirable researches, critical and experimental, which have recently appeared upon the subject, place us in a position, I think, to draw certain conclusions, at least on the physiological side of the question. To give the results of some of these researches is the object of the present communication.

The question which I have in view may be formulated according to the following scheme: Either the blood of one animal is injected into the veins of another of the same species, or it is injected into the veins of an individual belonging to another species. In either case the following conditions are to be taken into consideration.

1. The blood-volume of the animal receiving the injection.
2. The amount of blood injected.
3. The rapidity with which the injection is made.

Investigation has shown that whether the injected blood has or has not been previously defibrinated is a matter of indifference; as is also the fact of the injection having been made into an artery or vein.

The question of greatest importance to the practical physician is whether or not the blood of an animal of a different species may or may not be injected with impunity or advantage. This operation has been so frequently performed of late that at first sight the query would seem hardly worth answering. The results of physiological experiment stand, however, as I shall show, in such decided opposition to the results of practitioners that this must be regarded as the stand-point upon which the entire question turns.

Müller injected the defibrinated blood of one dog into the vascular system of another, measuring the pressure of the circulation meanwhile, by the aid of a manometer placed in the carotid of the recipient.

He observed that during, and for a short time after, the injection, pressure increased in the arterial system, decreasing again, however, in the course of a few minutes to the previous pressure or lower. This may be repeatedly observed in the same animal.

When we increase the volume of blood in an animal above the normal amount, we are not in a position to increase simultaneously the pressure in the arteries; for, as the result of an accommodation as yet not fully understood, the vascular system conforms itself to the increased volume of fluid in so perfect a manner that the newly introduced blood appears after a very short time to be entirely disposed of. The vascular system can, however, only accommodate itself gradually to the increase or diminution of its volume. In a short time after an abstraction of blood which has not been

too excessive, the pressure, which for a time had diminished in the arterial system, is observed again to rise to the point maintained before the blood-letting. Similar researches have been conducted by Panum and Ponfick with particular regard to the subject of transfusion.

And here the important question presents itself, What becomes of the blood thus introduced? Like Müller, these latter investigators give a negative answer to the query; saying, however, that if the transfusion is made with the blood of an animal of the same species, and in a not too rough fashion, the infused blood does not appear in the form of serous or bloody extravasations in the connective tissue or serous membranes.

Among the changes observable in a dog who has been thus injected, are reddening and warmth of the mucous membrane.

When an injection with defibrinated blood has been so managed as to introduce the fluid into the vascular system very hastily, various threatening symptoms appear, and if the injection is too hurried, it fills the right ventricle, and causes extreme tension of the vascular system. Following this, various extravasations in the region of the right ventricle may occur. Extensive extravasation may also take place into the tissue of the lung. Similarly punctate effusions of blood are found in the pericardium and pleura and in the mediastinum, as well as in the intra-vascular structures, the brain and its membranes.

These appearances, observed when the blood is forcibly injected with a syringe, may also be noticed after direct transfusion,—that is, when blood from an artery of one animal is made to flow directly into the vein of another.

If one, however, is careful to regulate the introduction of the blood, the effect is in no way different from that produced by transfusion with defibrinated blood of the same animal. Since, however, the latter method is more easily carried out, and since the amount of the injected blood may be certainly measured and the pressure under which the transfusion is performed can be accurately regulated, which latter cannot be done in direct transfusion, the indirect method is to be preferred.

While the injection into the veins of a healthy animal of blood taken from another individual of the same species exercises little or no influence upon the former, it is far different when transfusion is performed in an anæmic animal. If, for instance, an animal nearly dying from excessive loss of blood is injected with the blood of another individual of the species, the former will be preserved alive with not perceptibly disturbed health. An experiment conducted by Dr. Panum, which illustrates this point, may be here cited.

A half-grown dog was deprived of 200 centimetres of blood, and then had injected 128 centimetres of defibrinated blood from another dog. The defibrinated blood had been preserved in a jar surrounded by ice for twenty-four hours, and, just before the transfusion, was warmed up to a temperature of 36° centigrade (97° Fahr.). After the blood-letting the dog operated upon

became very weak, but recovered entirely after the transfusion, and was as well as ever, no symptoms of any kind being observed.

On the following day 160 centimetres of blood were again taken from this animal, and 150 centimetres of defibrinated blood from another dog were injected. In spite of the fact that the amount of blood transfused into this dog equalled one-third its entire estimated blood-volume, the body-weight remained undiminished. The dog weighed previous to the first transfusion, before a meal, 9920 grammes, afterwards 9950 grammes. On the day of the second transfusion the animal weighed, after eating, 10,450 grammes; on the following day 10,520 grammes before, and 11,200 grammes after, eating; and eighteen days later he weighed, after eating, 12,430 grammes.

This dog was subsequently caused to lose a large portion of his blood in the course of four hours, new defibrinated blood from another dog being simultaneously introduced, so that while 542.5 centimetres of blood were lost, 592 centimetres of defibrinated blood were injected.

If the original blood-volume is reckoned here as one-third of the body-weight, this dog would have had 634 centimetres of blood before the transfusion, so that 93 per cent. of the original blood-volume was exchanged for an equal amount of the blood of another individual of the same species. This dog, which, before the experiment, had weighed 12,430 grammes, weighed the morning after, subsequent to the daily meal, 14,450 grms.

Many other researches prove that the blood-corpuscles of one individual may be so transplanted in another that they continue to act normally, that is, to absorb oxygen constantly from the lungs, and to carry it to the tissues. Here then is the indication for the medicinal use of transfusion. Transfusion, then, is only indicated when a lack of active, working blood-corpuscles is made out. Researches in this particular direction prove that we can neither by this means provide the organism with nourishing material, nor can we by combining blood-letting and the infusion of new blood free the organism from harmful material, which continues, nevertheless, to grow and become reproduced in it.

All this is of value concerning transfusion with the blood of animals of the same species. In order to give, in the shortest possible space, the appearances showing themselves when blood from another species is transfused, I subjoin the following experiment of Ponfick.

A dog had introduced into the jugular vein from the carotid of another animal, during forty-five seconds, 12 per mille of blood of the body-weight of the dog. The following symptoms were observed. During the reception of the blood there was moderate dyspnoea, and with this extreme nausea, but no vomiting, and free defecation. The extremities, particularly the fore-feet, seemed paralyzed. After an hour, bloody-red coloration of conjunctivæ of both eyes; darker in the left. After the animal had somewhat recovered, he was

untied, and observed with the necessary interruptions. There was some red coloration of the urine, fifty-five hours after the operation. During the first day the dog seemed to be doing well, but suddenly collapsed at the end of twenty-eight hours, and appeared moribund. The respiratory movements were superficial, weak, and infrequent. Reflex activity much diminished. The cornea was sometimes quite insensible, at others somewhat sensitive. The pupils were widely dilated. The animal lay powerless on its side; only occasionally was its deathly quiet interrupted by a convulsive movement or a groan. There were, in addition, disturbances of perspiration and circulation, and the dog died at the end of eighty hours from the operation.

Post-mortem examination showed severe renal disease, hemorrhagic effusions in the fundus of the stomach, some pleuritic adhesions, no deposits in the lungs, cornea swollen, and, in addition, hypopyon and keratitis.

Other experiments have resulted similarly, whether the blood of the other animal has been transfused directly or indirectly, with or without previous defibrination. Experiment shows that the serum of one animal dissolves the blood-corpuscles of other species.

From all these experiments it may be concluded that transfusion is indicated only when there are too few actively-working blood-corpuscles present; that transfusion can under no circumstances whatever bring about a cure in constitutional and infectious diseases. In all cases of transfusion among men, human blood should alone be used.

The most valuable contributions to the literature of the subject are the following: "Experimental Contributions to Our Knowledge of Transfusion," Ponfick, *Virchow*, Bd. 62, s. 273; and "Observations on the Transfusion Question," Panum, *Virchow*, Bd. 63, s. 1. Valuable contributions from a physiological stand-point will be found in an abstract of the work done in the Leipsic physiological laboratory under Prof. Ludwig, published in the *Berichte der Sächsischen Academie* for last year.

DR. E. TIEGEL.

NEW YORK, July 23, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

THE Woman's Hospital is now closed, according to custom, until the 1st of September; but just before this took place Dr. Thomas had a number of exceedingly interesting cases there. A week after the operation, we had the opportunity of seeing the patient in whom he amputated the cervix uteri for cauliflower excrescence, with the galvano-cautery, as described in a former letter. She had not had the slightest bad symptom, was in capital condition, and will soon be discharged, entirely and permanently cured of the affection, in all probability, or at least as perfectly protected against any return of it as it was possible to make her. The slight burn of the mucous membrane of the labia and vagina by the heat radiated from the

platinum wire was now quite healed, and the parts were altogether normal in appearance.

Among the other cases operated upon during the last few weeks were the following :

Rupture of the perineum through the sphincter ani.—Sims's operation was performed. The mucous membrane was denuded with scissors, first directly over the torn sphincter muscle, and then forward on both sides, over all the surface to be united. The interest of the operation centred in the first two sutures, which were parallel to each other, and passed deep in the tissues entirely around the anus, thus forming an artificial temporary sphincter, or, more correctly, a splint, as Dr. Thomas calls it. It is impossible to close up the anus completely in this way (as some might anticipate), on account of the surface not being denuded all around. The third suture comprehended the tips of the sphincter ani muscle, but was twisted in front of the anus. Four other sutures were then put in anterior to this, as in ordinary cases when the sphincter is not involved. Simple silver wire was used for all the sutures, without any quills, clamps, beads, or other of the contrivances still generally employed in such cases by English gynecological surgeons.

Ruptured perineum and laceration of the cervix uteri.—Dr. Emmet was the first to call the attention of the profession to the train of evils resulting from lacerations of the cervix, which are so frequent, and so often pass unnoticed, during parturition; and in this case Dr. Thomas performed the operation which he devised for its cure. The patient having been placed on the left side and the Sims speculum introduced, the flaps were separated, and the surfaces which had been lacerated were freely denuded from one lip to the other; a broad undenuded tract, however, being left in the centre, from before backward, which was to form the continuation of the uterine canal to the os. When the hemorrhage is profuse it can be controlled to a great extent by the uterine tourniquet, which is slipped over the cervix and tightened sufficiently high up not to interfere with the operation.

The introduction of the sutures is difficult in these cases, from the great density of the diseased uterine tissue and the mobility of the organ. The first one was passed through the anterior flap, close along the bottom of the fissure, and withdrawn just at the edge of the undenuded strip left to form the canal. It entered again at a similar point in the opposite lip, and made its exit then on the vaginal surface of the posterior flap corresponding with the first point of entrance. Three sutures were inserted on each side, especial care being taken in passing the last one, through the crown of the cervix, with the view of accurately approximating the edges at the os, and along the vaginal surface from this point.

The same plan was followed for securing the uterus as in the operations for vesico-vaginal fistula, ruptured perineum, etc. The needle was armed with a short silk loop, and, after its introduction, the silver wire attached and drawn through to take its place. The ends

of the wire were then seized by a pair of forceps and twisted over the "shield," and finally cut off at half an inch in length and bent over flat, so as to lie close to the vaginal surface. The rupture of the perineum in this case did not involve the sphincter ani, and in the operation for its restoration Dr. Thomas adopted the novel procedure of taking in a portion of the posterior wall of the vagina, which was abnormally redundant, to form part of the perineal body.

Vesico-vaginal fistula.—The patient was a woman of large frame, and a perfect mountain of obesity, weighing probably between two hundred and three hundred pounds. The loss of tissue had been enormous, and, though Dr. Thomas had already performed four operations in the case, a very large fistula still remained. The first had been for the purpose of forming a new urethra (that canal having been quite destroyed), and was entirely successful, though, of course, the urethra would be of no use until the fistula was closed up. The other three operations were undertaken for this purpose, but the opening was so very extensive that no attempt had been made to close it all, except at the last one. This had proved unsuccessful, though the fistula was now only one-half the size it had been formerly.

Dr. Thomas considered this as difficult a case as he had ever seen, and thought it doubtful whether a perfect cure could ever be made. Still, he was willing to make one more attempt, and on the present occasion he was desirous of trying the effect of a "new dodge" which had occurred to him in thinking over the case. This was to secure leaden clamps, by means of silver wire, on each side of the fistula before proceeding to the regular operation for its closure. The failure to unite before had been caused by the huge size of the woman, which produced such tension on the sutures that they always tore out, and the design of the clamps was to remove this from them, as far as possible.

The clamps having been adjusted, after considerable difficulty, on both sides of the fistula, not far from the edges, Dr. Thomas proceeded to denude the surfaces to be united. As before stated, the destruction of tissue had been enormous in this case, the whole base of the bladder having sloughed away, and the cervix uteri having been torn in addition. The capacity of the bladder now was probably not half that of the normal viscus.

The hemorrhage is usually very great in operating in such cases, particularly where it is necessary to cut into the mucous membrane of the bladder, as in the present instance, and Dr. Thomas is of the opinion that it was controlled to a great extent here by the clamps previously secured. Even fatal hemorrhage has been known to occur sometimes in these cases. The operation was tedious on account of the almost insurmountable difficulty of getting at the parts in such a subject, and at least a dozen sutures—possibly as many as fifteen—were necessary on account of the still very large size of the fistula.

The first two were taken in the tissue of the lacerated cervix. Dr. Thomas thought the upper part of the fistula might now unite, but was very skeptical about

the lower portion. Perhaps, however, he said, still another operation in the fall might effectually and permanently close it.

Dr. Emmet, whose experience in these cases is extremely large, had examined the patient and had expressed the opinion that this fistula was probably incurable. If this is so, it will be only the second case of the kind that Dr. Thomas has met with which has baffled his skill.

The report of a case of *atresia vaginæ* I shall be obliged to reserve for another letter.

From the weekly reports of the Registrar of Vital Statistics we learn that there were 890 deaths in this city during the week ending Saturday, July 17, and only 454 births, which is certainly not a very gratifying exhibit; though this is the season of the year when the rate of mortality always reaches its maximum.

Still, the death-rate in New York is almost always greater than that of most other large cities in the summer; and this is undoubtedly due to the great fatality of gastro-intestinal diseases among the children of the swarming tenement population of the city. In the week ending July 10, when the number of deaths reached 743, the death-rate here was equal to 37.97 in the 1000 inhabitants yearly; while Philadelphia reported its rate at 27.64; Washington, 27.50; Boston, 20.10; Baltimore, 30.46; Chicago, 30.83; Cincinnati, 30; and Nashville, 32 per 1000. In Richmond, however, it ran up to 44.82. For the week ending July 3, twenty-one large cities of Great Britain reported an average equal to 22 per 1000 yearly death-rate, and Paris reported its rate at 22.09. In New York during the same week the number of deaths was 568, representing an average rate of 27.86; which was less than that of Philadelphia (32.94), Washington (41.25), Baltimore (34.95), or Boston (30.27) for the same. In speaking of the increased mortality here during the past week, the Registrar says it occurred wholly in children under five years of age; 601 of the 890 being of such young children. There were fewer deaths in that portion of the city population which is five years of age and upward than in the average of the year. Of the 359 deaths attributed to diarrhoeal disorders, only seventeen are of persons over five years old. The death-rate in that portion of the whole population which is over five was equal to 16.07 per 1000 annually, while in children under five it was 249.86 per 1000. Young children perish under the influence of continued high temperature in every crowded district in the city, while adult life has in these successive summers suffered a less rate of mortality than in the other portions of the year. During the week ending July 10, 75 cases of diphtheria and 116 cases of smallpox were reported, and during the week ending July 17, 64 cases of diphtheria and 102 of smallpox.

The attention of the Board of Health has been called to the fact that there were 14 deaths from drowning during the week ending July 10, and 32 in the four weeks preceding. As most of the accidents occurred at those sections of the river-sides at which the Health

Department's rescue-apparatus and posted instructions for resuscitating from drowning are not sufficiently near, some lives were no doubt lost for want of the rescue-poles and heaving-lines.

The Fifth Annual Report of the St. Mary's Free Hospital for Sick Children shows that the affairs of that institution—the only child's hospital proper in this city—are in a flourishing condition. The work was inaugurated in 1870, by the Sisters of St. Mary, of the Protestant Episcopal Church, when a house was taken in Fortieth Street, admitting of fifteen beds. This was soon found to be too small, however, and in 1873 the children were removed to their present house in West Thirty-fourth Street, where twenty-six can be accommodated. Here, it was thought, the additional room and more convenient accommodations would prove sufficient for some years to come. The location was good, and the large open garden at the side of the house afforded a healthful breathing-space for such children as were able to go out of doors. During the last two years, however, the work has increased so constantly that a much larger building seems to be a positive necessity, and it is now proposed to purchase the premises already occupied (which have hitherto been rented), and put up a large addition to the house, for which there is ample room on the space adjoining without interfering too much with the children's playground. A number of ladies are in the habit of visiting the hospital from day to day, for the purpose of teaching, reading to, and amusing the children, and who also make, donate, and mend a large quantity of clothing for them. Twenty-five parishes are represented in the Board of Managers, and the managers desire that one or more ladies from every Episcopal church, not only of the city but of the State, should belong to it, in order to make the hospital as general an institution as possible.

The report of the Medical Staff shows that the number of patients in hospital both January 1, 1874, and December 31, 1874, was 21, and that during the year 73 were admitted, and 13 died. The following operations were performed in the same time: exsection of hip, 2; exsection of elbow, 1; for entropion, 1; circumcision, 2; refracture of arm, 1; removal of os calcis, 1; for necrosis of humerus, 2; removal of foreign body from ear, 1.

During the winter there was a slight outbreak of diphtheria, from which one patient died, and a number of children later in the season were attacked with *röthelea*, or German measles, but there were no fatal cases. The physicians attribute the success attending their treatment in general, in a great degree, to the careful and intelligent nursing received by their little patients. "No one at all conversant with the system of nursing generally adopted in hospitals," say they, "can help being impressed with the superior advantages of the plan pursued here, where the nursing is under the constant and personal supervision of Sisters thoroughly educated as nurses. There is no class of patients who require more constant watching, more gentle attention, and more kindly discipline than do sick children; and no one

can be so well qualified to carry out these requirements as ladies who give themselves to the work solely from a love for the work itself, and for the little ones committed to their care." Drs. Robert Watts and Charles Poore are the attending, and Drs. Flint, Sr., Alonzo Clark, George Peters, and Erskine Mason, the consulting, physicians and surgeons.

Drs. Isaac E. Taylor and Gouverneur Smith having resigned their positions as attending physicians to Bellevue Hospital, Drs. A. B. Crosby and J. P. P. White have been appointed in their places, and Dr. Taylor has been made consulting physician.

Dr. Pallen has been appointed attending surgeon to Charity Hospital in the place of Dr. White, resigned.

PERTINAX.

REVIEWS AND BOOK NOTICES.

LESSONS ON PRESCRIPTION-WRITING AND THE ART OF PRESCRIBING. By W. H. GRIFFITHS, Ph. D., L.R.C.P.E. London, Macmillan & Co.

This little duodecimo of one hundred and fifty pages is agreeably written, and is the most elaborate and satisfactory exposition of the subject on which it treats that we know of. We can heartily recommend it to any one seeking such knowledge as it contains.

TWO THOUSAND YEARS AFTER; OR, A TALK IN A CEMETERY. By JOHN DARBY. Claxton, Remsen & Haffelfinger, Philadelphia.

This little book is not medical in a strict sense of the word; and therefore those readers of the *Times* who value a paragraph only as it affords them immediate additions to their armament for war with disease, may as well skip the present notice. To all thinkers in the profession, the brochure of Dr. Garretson upon a subject which ought to interest every man, and which lies very close to many of the higher disease-problems, must have interest. The writer of the present notice is not a philosopher, and therefore must beg the author's pardon for presuming to criticise his really extraordinary book. We remember, however, to have heard an artist say that he liked to hear the comments of the laity upon his pictures, for, although many ridiculous things were said, yet every now and then a shrewd remark would give him much food for thought.

The book is written in the form of a dialogue, at a supposed reunion of the participators in the immortal controversy that took place on the day of the death of Socrates, concerning the immortality of the soul. It is, as it were, an addendum to the *Phædo* of Plato.

Dr. Garretson is a positivist, holding allegiance to the belief that mind is but the result of organization, and, therefore, cannot be immortal, but, at the same time, claims for man immortality. His chief argument may be summarized as follows:

Man has six senses, so have other animals. Man in this does not differ from a brute; but man has the power of knowing God, and animals have not. Therefore, man differs from the animal in that he possesses what Dr. Garretson calls the sense of *Apprehension*. Further, all men do not use this sense of *Apprehension*, and consequently never know God. To know God, in our author's sense, is to have God dwell in one, and to have God dwell in one is to "grow a soul;" or, in other words, the soul of a man is a part, if the term may be allowed, of God. Some men, refusing to use the sense

of *Apprehension*, never grow a soul, and die, as the beasts die, to rot,—nothing more.

It seems to us very plain where the fallacy is in this argument. It is in the assumption that animals do not have the idea of God. How does Dr. Garretson or any one else, as a philosopher,—*i.e.*, outside of revelation,—know that animals have not the glimmerings of such an idea; that precisely as in them all the mental powers of man are found foreshadowed, so is also his power of conceiving of the idea of God? The author meets this objection in part by pinning his reader on the other horn of the dilemma: if there be no difference between man and animals, then must they share in death a common fate. But, as a philosopher, how does any one know that man is immortal, or that animals are mortal? Even some learned orthodox theologians have believed that animals do share the immortality of man.

Again, granting that man does differ from the brute in the possession of *Apprehension*, Dr. Garretson, to our mind, does not prove that this property of *Apprehension* is not due to the possession of a soul. Let us put the two objections together. Man being organized as animals, if "*Apprehension*" be a mere result of organization, it must, like every other result of organization in man, be shared by the lower animals. Hence they must also have the power of knowing God and growing a soul. Or, on the other hand, if "*Apprehension*" exist in man but not in animals, it cannot be the result of organization, as its existence in man proves that he has a something in himself which is not the result of organization, and which we call soul. Therefore, man may grow—*i.e.*, develop—the soul and become God-like, but the soul that is perfected exists in him from the first.

We do not put this forward as an irrefragable argument, but as one to our thinking, at least, as valid as that of our author. Its logical outcome seems to us in accordance with the Christian idea of the future state, whilst that of the argument of Dr. G. is Buddhism; for if man simply allows himself to have God dwell in him, after the death of the man the God must go whence he came,—*i.e.*, the part that has emanated from the Deity must be absorbed into the Deity, when the casket in which it was confined has been broken.

Dr. Garretson attempts to reconcile his belief with the preservation of the individuality of the man. He says, "Are not the individualities of children as entities, and yet is it to be denied that parent and son are one?" We think any one not a philosopher would not hesitate in his answer to this question. To assert that Adam is the whole human race, past, present, and future, seems scarcely judicious in one who wants to convince ordinary minds.

The perusal of the book before us has confirmed a cherished belief that philosophy, so called, is, like alchemy, an endless search after the unfindable.

God can be known to the race only by manifesting himself. The finite cannot by searching find out the infinite, and the revealing God can only prove to man his Godhead by working miracles,—*i.e.*, by commanding or suspending the ordinary laws of nature. This, if the Scriptures be historically correct, he has done; if they be not true, we have no hope. The belief in the immortality of the soul and the truth of the gospel must, to our thinking, stand or fall together. We see no logical ground midway between the most absolute positivism and the acceptance of the Scriptures.

Almost every decade has its philosopher, and, from Thales to the latest modern, each has been a law to himself. If the reasoning of his fellows has ever changed the belief of a philosopher, we are unaware of it. In science truth is demonstrated, and all men acknowledge it; in philosophy truth cannot be demon-

strated, and each man sets up his own conception,—the outgrowth of the law of his being and his circumstances, which he worships as the truth. Not that we condemn philosophy; far from it. Everything has its uses, and as alchemy brought forth so many valuable discoveries, so has philosophy begotten multitudes of the highest of human thoughts; and the book before us, sharing, as we believe, the common fate of other works of its class, in missing the truth, yet gathers so much of beauty, and throws out so much of suggestion, that we have read it not only with deep interest, but with a resultant of actual good.

GLEANINGS FROM OUR EXCHANGES.

MODUS OPERANDI OF YELLOW-FEVER POISON (*New Orleans Medical and Surgical Journal*, July, 1875).—Dr. George M. Sternberg, Assistant-Surgeon U.S.A., after considering at length the various theories in regard to the causation of yellow fever, concludes that the evidence is sufficiently convincing as to the implication of the sympathetic nervous system in yellow-fever poisoning, but that we have no evidence that blood-changes occur prior to the implication of the sympathetic which marks the outbreak of the disease.

The action of the poison upon the sympathetic seems to be a paralyzing one, causing arrest of function, and producing phenomena similar to those following division of the sympathetic in any part of the body.

Whether the blood is also primarily affected by the poison, or whether the changes in it are all secondary to arrest of the processes of nutrition, secretion, and excretion, may be considered a question still *sub judice*.

The fact, however, that in cases which terminate fatally within a day or two the blood is found to be fluid, the red corpuscles more or less disorganized, and the hæmatin to have stained the tissues of the body, makes it probable that the poison also acts directly upon the blood; but that this action is of the nature of a fermentation, there is not the least evidence.

He suggests galvanization of the sympathetic, or the use of ergot, in the treatment of yellow fever.

CONVULSIONS IN A MALE, ASSOCIATED WITH VESICAL CALCULUS (*The American Practitioner*, July, 1875).—Dr. W. H. Long reports the case of a young man æt. 19, of an excitable, nervous temperament, who, after some slight physical exertion, was suddenly taken with a dull headache.

He was persuaded to lie down, and in a few minutes all the voluntary muscles of his body became rigid; his eyes were fixed with a vacant stare; his breathing was labored, resembling that of a child with false croup. No effort could rouse him to consciousness, and the laryngeal spasm became rapidly worse and the muscular contractions irregular. His body was bent, first on one side, then on the other; sometimes twisted and then bent back, as in tetanus. Occasionally the laryngeal spasm was so great as to suspend respiration entirely, and during the time of this suspension the convulsive movements of the body were extraordinary.

This condition lasted for about six hours, and was succeeded by a quiet natural sleep, on awakening from which he had no recollection of his convulsive attack. These paroxysms continued for several days. He was put upon thirty-grain doses of bromide of potassium three times a day, with citrate of iron and strychnine every six hours. Subsequently, morphia was added, and was given for two weeks. He was then free from trouble for some weeks, when his paroxysms suddenly returned, and about the same time he exhibited symptoms which indicated the passage of a calculus from the left kidney to the bladder. He was then under treat-

ment for about six months, gradually improving, when a stone was discovered in his bladder. Lithotripsy was performed, the fragments were all discharged, and since that time the patient has remained perfectly healthy, is stout and robust, and has had no return of his troubles.

PUERPERAL TETANUS (*Edinburgh Medical Journal*, June, 1875).—Dr. Angus Macdonald reports a case of puerperal tetanic convulsions occurring in a woman æt. 24, about two weeks after her second confinement. He gives the following points as differentiating the case from an ordinary case of eclampsia:

1. The spasms were distinctly *tonic*, and not clonic or mixedly tonic and clonic, as we find in cases of eclampsia.

2. The pupils were somewhat *contracted* and fixed, instead of *dilated* and fixed, as is the ordinary condition in deep eclampsia.

3. The face continued pale during the seizures, instead of becoming congested as in eclampsia.

4. The contractions were very markedly more powerful in the posterior aspect of the body, so as to establish a condition of more or less continuous and complete opisthotonos.

5. The rate of recurrence of the spasms was much more rapid than in any case of eclampsia that he had witnessed, and his experience refers to a large number of cases.

6. The spasms were capable of being excited and intensified by the slightest external stimulus or irritation, such as the touch of the cold hand, or examining any part of the body by tactile manipulation, which is not the case in eclampsia.

7. There was no albuminuria present, which we generally, though not invariably, find in cases of puerperal eclampsia.

On the other hand, the first attack was very sudden; the breathing was stertorous during the individual seizures; the patient was completely unconscious, and these considerations, together with her general aspect, were forcibly suggestive of eclampsia. The preponderance of symptoms, however, tended to prove the existence of a tetanic rather than an eclamptic condition.

IDIOCY (*St. Louis Clinical Record*, July, 1875).—Dr. Alexander B. Shaw reports the case of a family among the members of which idiocy exists to a remarkable degree without there seeming to be on either paternal or maternal side any circumstance pointing to insanity. There is an entire absence on both sides of paralysis, fits, idiocy, tuberculosis, scrofula, syphilis, etc. Consanguinity is denied, and the individual histories of both parents are entirely devoid of any explanatory feature. Four out of five children born during a period of ten years are drivelling idiots.

UTERINE THERMOMETRY (*The St. Louis Medical and Surgical Journal*, July, 1875).—Dr. William Schlesinger has made a series of thermometric measurements to compare the temperature of the healthy non-pregnant uterus (cervix and fundus) with that of the axilla, vagina, and rectum. The instrument used is a thin, slightly-curved, long, bulb thermometer, guarded by a delicate metal case. It must not be introduced with the aid of the speculum, as contact of the cervix with the atmosphere reduces the temperature, and the thermometer must then remain in place a much longer time to indicate the temperature proper of the organ. His results show that the difference between the temperature of vagina and axilla and of uterus and axilla is greater in the non-pregnant than in the pregnant womb, and that the difference between uterus and vagina is about the same in the pregnant and the unimpregnated female.

The practical deduction is that the assertion of former authors who claim that the increase of temperature in the pregnant uterus over that of the vagina was owing to the heat generated by the fœtus, cannot hold good; the same difference of temperature exists between the non-impregnated uterus and vagina.

The author is, however, not prepared to deny the fact that the death of the fœtus in utero will cause a diminution of temperature in the uterine cavity so that it will sink to a level with that of the vagina, and that a correspondence in the temperature of a pregnant uterus and the vagina may indicate the death of the fœtus.

HIRSUTIES GESTATIONIS (*The Medical Record*, July 10, 1875).—Dr. Charles E. Slocum reports the case of a lady, æt. 22, who has borne three children at full term, and suffered one abortion at six or eight weeks. In each gestation a hairy growth on the side of the face and under the chin has uniformly started at the commencement of pregnancy or soon after the cessation of the menses, and continued until childbirth.

Her attention is first called to the parts soon to be covered with hair by a sense of heat and itching, which is allayed but a short time by rubbing, and which continues about three months, with more or less annoyance, and then subsides, to return again after accouchement and remain until the falling of the hair.

The hair is thick-set, fine and soft in texture, straight, and lighter in color than the hair of the head. Its length at childbirth is one to one and a half inches, when its growth apparently stops, and after a period of time varying from four to six months (first child six months, second and third children four to five months), or about the time when the uterine system resumes its catamenial functions, it falls, and the face resumes its normal smoothness.

This hirsute condition during gestation is the only peculiarity in the lady's history. She has uniformly enjoyed health. The menstrual flux was established when she was between thirteen and fourteen years of age, appeared regularly, and was attended with no peculiarity. From the age of fifteen to the time of her marriage, two years later, she suffered slightly from dysmenorrhœa, but not since marriage.

At the time of her abortion the growth of hair on the face was very noticeable, and she became so soon again pregnant that the growth continued until the second conception was completed.

There has been nothing peculiar in the appearance of her children.

Mrs. R. is of medium height and size, with dark-brown hair, hazel eyes, and a fair skin, which becomes of a darker hue when she is in the pregnant state. There was but little nausea following conception, and she was vigorous and able to attend to her household duties at all times. No change or peculiarity other than that already noticed occurs.

MISCELLANY.

HÆMOSTASIS IN SURGERY.—What shall we do with the arteries after surgical operations? It seems now to be a matter of taste; for, to take only the hospitals of London, it will be found that acupressure, torsion, and the ligature, either with silk or catgut, are severally practised in different institutions. No one will, however, complain that various means should be at hand; it is for the surgeon to decide which is the most appropriate in a given case. Much may depend, however, on

whether ischæmia (Esmarch's compression) be used or not. Torsion is a favorite practice in some hospitals; but we have seen abundant secondary hemorrhage after it, and statistics in this respect are wanting. We are, no doubt, far from the time when hot oil was used; and we may boast of a gigantic stride in regard to hæmostasis, though we are apt, now and then, to fall back upon the practice of our ancestors. And here we have Professor Verneuil, of Paris, who is strongly advising *forci-pressure*, which, as the Professor mentions, was first practised by Desault in 1790. It chiefly consists in the application of forceps with continuous pressure, which may be kept up from twenty-four to forty-eight hours without inconveniencing the patient. The instrument has even been known to remain until it became spontaneously detached. The blades may be smooth or toothed, the latter acting more quickly, and, in most cases, successfully. M. Verneuil is convinced that this practice, so long neglected, will not again be so unaccountably abandoned.—*London Lancet*.

DR. PETER, of St. Antoine Hospital, mentions having seen the use of a bath produce most mischievous effects in pelvi-peritonitis. He explains the fact in the following way. On entering the bath, and in order to stride over the edge of it, the woman makes a violent movement, which destroys some of the adhesions established around the internal genital organs, and this rupture becomes the starting-point of a new onset of peritonitis.—*Lancet*.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I am sorry if it has been my mistake that in the discussion on chloral, McRean has been credited with the remarks of Dr. A. F. Shelley. It will be no less alarming to McRean than annoying to Shelley.

Very truly,

H. LEAMAN,
Reporting Sec.

July 26, 1875.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JULY 27, 1875, TO AUGUST 2, 1875, INCLUSIVE.

BROOKE, JOHN, ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 153, A. G. O., July 27, 1875.

ELBREY, F. W., ASSISTANT-SURGEON.—Granted leave of absence for twenty days, and, upon its expiration, assigned to duty at Frankfort, Kentucky. S. O. 106, Department of the South, July 27, 1875.

PAULDING, H. O., ASSISTANT-SURGEON.—Telegraphic instructions of 21st inst. from these Headquarters, directing to proceed, with all possible dispatch, to Fort Randall, D. T., for duty at that Post, confirmed. S. O. 141, Department of Dakota, July 24, 1875.

MAUS, L. M., ASSISTANT-SURGEON.—Assigned to duty at Nashville, Tennessee. S. O. 106, c. s., Department of the South.

TAYLOR, B. D., ASSISTANT-SURGEON.—Assignment at the United States Military Academy revoked, and ordered to report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 151, A. G. O., July 24, 1875.

HALL, W. R., ASSISTANT-SURGEON.—Assigned to duty at Fort Gratiot, Michigan. S. O. 144, Military Division of the Atlantic, July 26, 1875.

SHANNON, WILLIAM C., ASSISTANT-SURGEON.—Assigned to duty at Fort Porter, New York. S. O. 144, c. s., Military Division of the Atlantic.

SPENCER, WILLIAM G., ASSISTANT-SURGEON.—Assigned to duty at Lebanon, Kentucky. S. O. 106, c. s., Department of the South.

ROSSON, R. L., ASSISTANT-SURGEON.—Assigned to duty at Fort Monroe, Virginia. S. O. 144, c. s., Military Division of the Atlantic.

SATURDAY, AUGUST 14, 1875.

ORIGINAL COMMUNICATIONS.

A CASE OF POISONING BY STRYCHNIA TREATED WITH CHLORAL HYDRATE AND POTASSIUM BROMIDE.

BY DR. C. BIVINE.

ABOUT midday on the 4th of March last, I was called to see Alice —, domestic, æt. 16, bright and intelligent for her station, of fine physical development, but with a shape of head and expression of countenance indicating deficient mental balance. Strychnia had been taken with suicidal intent, and was in a small bottle, such as manufacturers use to put a drachm of the alkaloid in. It contained "a little in the bottom and what stuck to the sides." She ate no breakfast that morning, and about 8 o'clock A.M. took the bottle, poured it full of water, shook it up, and drank the contents except a few drops. About twenty minutes afterwards she felt "queer all over," her limbs "became numb, and felt as if they were asleep." On attempting to lift a bucket of water, she found she could not do it; would stagger when she tried to walk, and soon after fell off the porch in a severe tetanic spasm. She had one after another, with slightly increasing violence and at irregular intervals from this time on. Owing to the distance at which she lived from my office, and my absence from home when first sent for, it was 12.30 P.M. before I saw her. Soon after taking the poison she confessed what she had done, and was plied with as much sweet milk as she could be made to swallow between the spasms. She was also given a quantity of a solution of sodium bicarb. From the combined effects of the milk and sodium salt she vomited about eleven o'clock (three hours after taking the poison), and again about twelve o'clock; the vomiting seeming to lessen somewhat the severity of the spasms.

When I saw her, she was lying with limbs extended and somewhat rigid; feet everted, head thrown slightly back, neck stiff, countenance pale and anxious, eyes wide open, pupils large, eyeballs oscillating at short intervals, skin moist and cool, pulse 84, full and soft, mind clear; said she had a little pain in the head, but no pain elsewhere, except when the spasms came on. On touching her wrist to feel the pulse, she was thrown into a severe tetanic spasm of the voluntary muscles, worse in the arm touched and in the muscles of the back of the neck. Thinking it probable that the quantity of milk taken had hindered the absorption of the poison, I gave her a dose of tannic acid as an antidote, which she vomited; gave her another dose, which was retained. The spasms became more violent; there was trismus, the jaws closing tightly on the cup whenever she attempted to take anything. General spasms, accompanied by opisthotonos and asphyxia, now came on. I gave her forty grains of chloral hydrate, and re-

peated it in half an hour, soon after which she fell asleep. I left, ordering a repetition of the dose of chloral whenever the spasms should come on again. About 8 o'clock P.M. a messenger reported that she had slept about an hour after I left, had then taken another dose, slept again, and was awake when he left, tolerably comfortable, with some slight convulsions. I gave him a mixture containing forty grains of potass. brom. and ten grains chloral hydrate to the tablespoonful; one tablespoonful to be given every hour till she slept or was perfectly quiet. About midnight I was sent for again, as she was "worse than ever." By the time I arrived, she was sleeping, the third dose of the mixture having quieted her. Her position was natural, breathing regular, 18 per minute; pulse 72, weak, with an occasional intermission in a beat. She slept about three-fourths of an hour; turned over uneasily, groaned in her sleep, and woke up in a violent spasm, accompanied by dangerous asphyxia. Having determined to try the bromide alone, she now got 3ii, in fifteen minutes 3ii more, then thirty grains every fifteen minutes till she had taken 3vi; it seemed, however, to have no effect on the convulsions, which rather increased in violence, and it sickened her stomach so as to cause attempts at vomiting. Gave her forty grains chloral, and in fifteen minutes twenty more; in a few minutes she fell asleep, and slept for four hours.

In the morning she awoke with a slight spasm, but, owing to the necessity of moving her to another room, the convulsions were very much aggravated, and were accompanied by opisthotonos, trismus, and asphyxia, leaving her unconscious for a time; gave her eighty grs. potass. brom. and forty grs. chloral hydrate at a dose, and in half an hour forty grs. potass. brom. and ten of chloral hydrate; after this she was pretty quiet; ordered the dose to be repeated in an hour if she did not sleep; when she had taken the third dose she fell asleep, and slept three hours. From this time the spasms gradually decreased in violence. She took potass. brom. in thirty-grain doses every hour when awake, with chloral at night as a hypnotic, and an occasional dose through the day, when necessary. As the convulsions passed off, the pulse lost its irregularity, remained about 72 per minute, rather weak; pupils became dilated; she had diplopia and confusion of vision, muscular soreness, and paralysis almost complete in the lower limbs, and very decided in all the voluntary muscles; could not put out her tongue; when she was raised up, her head would fall to one side; could not hold anything in her hand. About the middle of the day on the 6th (forty-eight hours after taking the poison) the paralysis began to disappear, leaving muscular soreness and a tired feeling, some dizziness (due to chloral, likely), slight renewal of the spasms, and some nervous symptoms, no doubt increased by the fact that her menses appeared about this time. The spasms were easily controlled by the bromide, and she got no more chloral. From this time forward her recovery was gradual but satisfactory. The convulsions which came on as the paralysis passed

off were light, and lasted about twenty-four hours; when they ceased I stopped all medicine, and, under the use of milk-diet and as perfect quiet as could be obtained, she recovered entirely. She passed her urine once every twenty-four hours; the bowels moved soon after she took the poison; again, naturally, on the 8th, and were regular afterwards. In the first thirty-six hours after taking the poison she got three hundred grains of chloral and about two and a half ounces of the bromide. The chloral weakened her pulse and made her "light-headed" for a few hours after she ceased taking it, and the bromide caused a little irritability of the stomach; but the bad effects of both soon passed off when the remedies were discontinued.

The symptoms in this case may have been prolonged by several circumstances. No doubt the milk and solution of sod. bicarb. which she took hindered absorption. Then she was of a nervous temperament and excitable and amorous disposition. It happened just about the menstrual period. Again, her mental condition was unfortunate, disappointment in love being the cause of her attempted suicide. Moreover, being in a country house in windy March weather, it was impossible to keep her out of draughts of air; she was four miles away from my office, and, being very busy at the time, I could not give her prolonged personal attention; my cautions with regard to giving too much chloral made her nurses too timid in the use of it in my absence.

My observations in this case would lead me to conclude—1, that the bromide alone had no influence on the spasms while they were on the increase, at least not in the doses I gave it in, viz., two doses of $\mathfrak{z}\text{ii}$ each fifteen minutes apart, then thirty grains every fifteen minutes till $\mathfrak{z}\text{ii}$ were taken, when it began to sicken her stomach; but after the spasms began to decline in violence it controlled them decidedly. 2. Chloral alone always gave relief, but it seemed to act only as a hypnotic, and not as a physiological antidote. 3. When the two remedies were given together, a much smaller quantity of each had a more beneficial and lasting effect; forty grains of bromide and from ten to twenty grains of chloral quieted her more than forty grains of chloral or one hundred and twenty grains of bromide given alone.

The uncertainty as to the quantity taken, and the length of time which elapsed before she got medical attention, make it impossible to say positively that the poison would have killed her; at least, however, she took enough to affect her most profoundly, and the remedies acted promptly and beneficially.

TARRYTOWN, Md., June 22, 1875.

A CASE OF SPORADIC CHOLERA—COLLAPSE—BENEFICIAL EFFECTS OF DIGITALIS.

BY JOSEPH V. KELLY, M.D.

I WAS called at 6 o'clock A.M., July 14, 1875, to see J. S. K., aged 35, a carter, who had worked very hard the previous day, exposed to a hot sun. Three hours previous to my visit he had been suddenly attacked with vomiting and purging.

The vomiting was incessant; the stools were numerous and large, and were described by the patient's wife as consisting of "white water," without fecal odor. There were cramps of the belly and of the muscles of the lower and upper extremities. The tongue was cool, the pulse 80, and regular.

He was ordered to be kept quiet, and to have 15 minims of aromatic spirit of ammonia in $\mathfrak{f}\text{ss}$ of liq. morph. sulph. every hour.

I was hastily recalled at 9 o'clock A.M., and found the man in a state of collapse. The vomiting and purging had continued, the cramps were intensified, the surface of the body cold and bluish, the eyes sunken, the voice a mere whisper, the features shrunk. The radial pulse beat 110, and was markedly irregular, the volume small; no valvular disease.

I determined on giving digitalis for the failing circulation, and, as time was precious, resolved on giving it hypodermically. One-third of a grain of morphia and ten drops of a reliable tincture of digitalis were dissolved in a syringeful of water, and the whole amount injected into the region of the deltoid muscle. The effect was marked and prompt.

In a few minutes the pulse became more regular and of larger volume, the vomiting, purging, and cramps ceased, and the man sank to sleep. In one and a half hours eight drops more of the digitalis were injected, and afterwards the remedy was given in ten-drop doses every four or six hours by the mouth. Brandy was also given internally as soon as the stomach quieted. In a few hours reaction became evident, the body warmed, the aphonia lessened, and the alarming symptoms subsided. There was no urine passed for twenty-four hours, and then the renal secretion was markedly albuminous.

The digitalis was continued for its diuretic properties. As there was some disposition to diarrhoea, on the 15th one-half grain of morphia was given.

July 16.—Patient doing well; passed one pint of urine, which contains less albumen. No appetite, and great muscular debility. After this the patient did well, and on the 22d of July my attendance ceased.

REMARKS.—I think there cannot be any question that the digitalis, by giving tone to the vascular system, contributed very largely to the patient's recovery; and I submit that the above case illustrates, in a marked degree, the value of digitalis in that class of cases where death by asthenia is apprehended.

4257 MAIN STREET, MANAYUNK.

STERILITY (*The Doctor*, July 1, 1875).—Among the causes of human sterility Dr. Sims mentions the projection of the neck of the uterus into the vagina. If the neck, says he, projects half an inch, sterility is probable; if one inch, it is almost certain; if one inch and a half, it is inevitable. Dr. Giuseppe, of Turin, maintains that in two women out of three the neck of the uterus projects naturally half an inch. The subject is one of importance, and the disparity of opinion merits careful consideration.

NOTES OF HOSPITAL PRACTICE.

GUY'S HOSPITAL, LONDON.

SERVICE OF MR. HOWSE.

Reported by JOHN B. ROBERTS, M.D.

EXCISION OF THE KNEE FOR CHRONIC DISEASE OF THE JOINT—THE ANTISEPTIC METHOD.

THIS woman, aged 27, has at various periods during the last eighteen years suffered with attacks of inflammation of the right knee-joint, which she states began subsequent to variola. Five years since, the inflammation was more severe than previously, and left the joint stiff; but she continued to walk upon the limb until five months ago, when it became so painful that she was unable to move it. The least movement of the limb causes acute pain. There is a certain amount of swelling of the joint, and there is evidently softening of the crucial ligaments, for the tibia and fibula are luxated backward and rotated somewhat outward. If the limbs are placed parallel, the eversion of the foot on the right side is readily seen, and the presence of disease is shown by rubbing the bones forcibly together. The articular cartilages are probably eroded, though there may be no bone absolutely denuded of its covering.

As in a case of this kind there is no use in attempting to cure the disease, and as extreme measures must be adopted, excision of the knee-joint shall be performed, and it shall be done by the antiseptic method. The limb is elevated, and the blood rubbed out towards the trunk with the hands; then the elastic bandage is applied, not all the way from the foot, however, but only around the thigh. The next step is to anoint the integument with carbolized oil, after which a circular incision is made below the patella, with a knife previously dipped in the antiseptic solution. This cut opens the joint, and is followed by a gush of pus and blood.

During all this time the assistants keep up a continuous spray of carbolized water upon the parts, using large atomizers containing a watery solution (1 to 40) of carbolic acid, in order to destroy all germs that may be in the air or upon the hands of the operator.

After the joint has been entered, the flaps are dissected up and the patella removed, when the bones are found covered with granulations and the cartilage is readily peeled off. A saw, with the blade set at an angle, is applied to the posterior surface of the tibia, and a section of the head removed, in one portion of which is found a loose sequestrum. In the head of the tibia there are seen two points of caseous bone, one on each side, which are removed by applying the saw transversely and cutting a triangular groove. The soft tissues around the end of the femur are next divided, and the condyles sawn off; a caseous point similar to those in the head of the tibia being found, it is removed by the gouge and saw. The presence of this disorganized bone proves the propriety of the operation in this case, which in past times would have been left without operative interference and merely placed upon a splint.

Ligatures are now applied to the bleeding arteries by passing a needle, threaded with carbolized gut, through the tissues behind the vessels, tying securely, cutting off the ends, and leaving the knot in the wound. The parts come together nicely after the excision, so as to make a straight limb, and are kept in apposition by gut sutures. Finally, the parts are covered with the dry antiseptic gauze recommended by Mr. Lister, of Edinburgh, and a roller applied to the whole length of the limb.

The removal of this diseased joint will render the patient much more comfortable, and, if all goes well,

will give her a limb which will enable her to walk without any difficulty.

SERVICE OF MR. BRYANT.

A CASE OF DISEASE OF THE TESTICLE—REMOVAL OF THE ORGAN.

This man for three months has had trouble in the left testicle, which is swollen and is the seat of pain of a peculiar dragging character. There is no history of syphilis. The tumor, which of late has been increasing in size, feels heavy, is not translucent, and is hard and tense, though slightly elastic to the touch; at its lower part it feels as though there was a cyst containing thick fluid.

The trouble here might be due to a collection of fluid in the tunica vaginalis, and to syphilitic, cystic, or carcinomatous disease of the testicle itself, but the symptoms and the examination seem to point to the existence of the last rather than the other affections. The pain of which the patient complains in the region of the loins might be attributed to a carcinomatous involvement of the lumbar glands; but it is well not to lay too much stress on this point. He states also that the pain experienced in the part is like that felt when the testicle is squeezed: hence it is reasonable to suppose that the organ, if it be the seat of disease, is not yet entirely destroyed, but retains something of its original character.

The tumor has not heretofore been tapped to determine positively the presence or absence of fluid, because, should there be none, the operation, though trivial in itself, would be followed by a great deal of irritation; but, as the man is now anæsthetized and ready for the operation of castration, should that be deemed necessary, the trocar is plunged into the swelling. There is no fluid found, and the puncture is followed by the escape of a little blood; therefore the removal of the diseased organ shall be proceeded with.

A vertical incision is made through the scrotum, and the diseased testicle, about the size of a goose-egg, turned out through the opening; after which a strong ligature is tied around the spermatic cord, and the mass cut loose. On section, the tumor shows a structure resembling syphilitic gummous deposits, but we are not prepared to say that it is so. Some portions are soft and disintegrated, while others are hard like enchondroma, as though the soft portion was a later stage where the growth had lost its vitality; and it is very probable that in time it would have been discharged externally. Whatever, however, be the true nature of the disease, it is practically best that it should be removed, and it is now evident that it would not have been advisable to have tapped until the time appointed for extirpation, because severe inflammation would certainly have ensued from plunging the trocar into this softened mass. There is no bleeding from the wound, and no ligatures or dressing will be required, but healing will take place by the ordinary process of granulation.

TRANSLATIONS.

THE LOCALIZATION OF THE VASO-MOTOR CENTRE.—Experimenting upon frogs, Dr. Moritz Nussbaum (*Archiv für die Gesamte Physiologie*) found that when the spinal cord is divided at its upper extremity by the galvano-caustic loop, and the medulla oblongata and brain carefully removed, intense contraction of the arterial walls takes place, observed under the microscope, in the interdigital membrane. This generally occurs within five minutes after the section, and is soon

succeeded by a period of dilatation, lasting about two hours. The nervous system of the frog has now had time to recover from the shock of the operation, and the *rhythmical contractions of the arteries again take place*, as in uninjured animals observed by Schiff and others. That this is produced independently of the action of the general muscular system, is shown by the fact that it occurs also under the same conditions in curarized animals, in which, also, *mechanical, chemical, and electrical irritation of the sensitive nerves are followed by arterial contractions*. After extirpation of the entire central nervous system, the tone of the vessels disappears, the preceding results from irritation of the sensitive nerves are naturally wanting, and the circulation ceases in twenty-four hours at the latest.

Dr. Nussbaum considers that it is therefore certain that the spinal cord, like the medulla oblongata, is individually concerned in the innervation of the vessels, and that the medulla oblongata contains only the upper end of the vaso-motor centre.

W.

NUTRITIVE VALUE OF SUBSTANCES IN BLOOD (Panum: *Centralblatt für die Med. Wissenschaften*, No. 28, 1875; from *Nordiskt. Med. Arkiv*).—In order to obtain the albuminous portions of the blood, that fluid was first diluted and then allowed to coagulate. The coagulum was then pressed out and dried, and from it a powder was procured which can be kept for years without change, and can be used for food. The results of the experiments with regard to its nutritive power by this observer have been tabulated as follows:

1. If dogs are thus fed, 92 per cent. is absorbed, the remaining 8 per cent. being all that can be obtained from the fæces of the animals.

2. The nutritive value of eighty-four grains of the powder, as estimated from the amount of urea excreted during twenty-four hours, is equal to that of three hundred and seventy-five grains of lean meat.

3. When the diet consists largely of matters containing fat and starch in excess, much more carbonic acid and water is excreted than when substances containing albumen are used, more especially powdered blood. In order to keep the ordinary amount of carbonic acid in the body when this powder is employed for food, only half as much carbon has to be given as when a mixed diet of 18 per cent. fat and 72.6 per cent. barley is used.

4. The addition of phosphate of potassium to the food does not influence its value.

5. A dog fed exclusively with barley, fat, water, and common salt for a period of three months can be kept in perfect health. The barley contains all the salts needed to preserve health, but its effect is much increased by the addition of blood-powder.

6. When the albuminous substances of the blood are used as food, the amount of coloring-matter of the blood increases.

7. The amount of saline contents of food which is essential to nutrition is quite small.

W. A.

THE USE OF GUM CLOTH IN THE TREATMENT OF DISEASES OF THE SKIN (Besnier: *Centralblatt für die Med. Wiss.*, No. 27, 1875; from *Bull. Gén. de Thérap.*).—India-rubber cloth was first applied in the treatment of cutaneous affections by Dr. Colson, of Beauvais, and both Hardy and Hebra have since attained satisfactory results from its use. Besnier during the past two years utilized the immense material of the Hôpital Saint-Louis for experiments as to the value of this mode of treatment, and especially prizes gum cloth as a substitute for poultices and the continual bath. He employs for the most part the vulcanized cloth, and only gives the preference to that which is not vulcanized when the

head is to be bandaged or when the patients are delicate children. The cloth must always be clean and entirely dry. Whenever the bandage is changed it must be carefully washed in cold water, spread out, and dried. It must always be applied directly to the diseased skin, without any intervening substance. No pressure must be used in applying it, for the secretions of the skin must be freely allowed to accumulate beneath it. B. casts to one side the gum gloves and stockings, as expensive and unnecessary, but retains the finger-stalls, which, however, he insists should be both long and wide; he also encloses the extremities in gum cloth, and fastens it about them like a sack. On the head he applies caps which are retained in place by their elasticity, and for the trunk shirts and jackets can readily be made. Sometimes this dressing is worn continually, as in pruritus of high grade, but usually only at intervals. As a rule, the gum cloth is used only at night, the patient during the day remaining without any treatment, or being treated with salves, baths, etc. After the bandage is removed, the part to which it has been applied must be carefully dried and powdered with starch or covered with salve. The activity of the cloth depends almost entirely upon its impermeability, which causes an increased cutaneous secretion, and compels the secretions to accumulate upon the skin. The result is to some extent like that attained by the use of a continual bath, as the air is kept from the diseased skin and all friction avoided. He thinks it is extremely improbable that there is any specific action of the sulphur which is contained in the vulcanized rubber. The chief effect is maceration, by which all crusts are speedily removed, as by a poultice. Although to some patients this form of treatment is not applicable, no evil results have been met with even when large surfaces of the body have been thus covered. This treatment is especially indicated when it is desirable to soften the skin, as in eczema, lichen, or pruritus of a severe type. In psoriasis, pemphigus, and syphilis it is more seldom indicated. In the treatment of ichthyosis, eczema rubrum, and moist eruptions of the hairy scalp it seems to give good results.

W. A.

PRÆPUTIAL CALCULI (*Virchow's Archiv*, lxi. 560-565).—In the prepuce of a man aged 52 years, with congenital phimosis, were found fourteen concretions, which together weighed 28.5 grammes. The largest of these, which had made quite a depression in the glans, weighed 12.5 grammes. The calculi had a nucleus which was of at least the size of a pin's head, and in which no layers could be seen, while the exterior portions of the stones were stratified. This external portion consisted of urates of various alkalies, phosphate of calcium and ammonium, phosphites of magnesium, while the nucleus contained a good deal of horny epithelium. In those cases in which no epithelium was detected, it was still thought that the epithelium from the point at which in the fœtus the prepuce and glans join had furnished the nucleus about which the salts from the retained urine deposited themselves. The man had been the father of five children, and finally died of purulent cystitis and nephritis.

W. A.

INVERTED TEMPERATURE IN MILIARY TUBERCULOSIS (Brunniche: *Centralblatt für die Med. Wiss.*, No. 27, 1875; from *Gaz. Hebdom.*).—Among ninety-three cases of phthisis which were observed by Brunnich in 1871 and 1872, and upon which he made post-mortem examinations, a percentage of 59.1 was found with an inverted type of temperature. In twenty-one cases in which miliary tuberculosis did not exist, this inverted type was met with but seven times, a percentage of 33.3.

From these figures Brunnich concludes that this inverted temperature type is a comparatively frequent sign of miliary tuberculosis, and of great diagnostic

value both for the acute and chronic forms. For prognostic purposes it is of extraordinary value, since it sometimes points to an eruption of miliary tubercles, and the consequent grave results. W. A.

ABSORPTION THROUGH THE SKIN (V. Wolkenstein: *Centralblatt für die Med. Wissens.*, No. 26, 1875).—These experiments were for the most part made with the skin of the legs of frogs, which had been stripped from the groin to the toes when the phalanges were disarticulated, so that closed sacs like the fingers of a glove were obtained. The skins of rabbits, etc., were also used, but the hair with which they are covered was found to interfere very seriously with the success of the experiments.

The results of the observations are as follows:

1. The skin is permeable for aqueous solutions when they are not too highly concentrated.
2. An elevation of the temperature of the solution increases the amount of absorption of which the skin is capable, as the absorbent power stands in direct relation to the temperature of the fluid.
3. The skin of young animals of a given species permits absorption with more readiness than that of the old.
4. Hair and wool render absorption more difficult.
5. Certain alkaloids are absorbed by the skin, and give rise to symptoms which characterize the intoxication resulting from them. W. A.

TAYUYA, A NEW ANTI-SYPHILITIC.—M. Stanislas Martin, pharmacist, contributes to the *Bull. Gén. de Thérap.*, No. 12, 1875, an account of this latest addition to the Pharmacopœia. It appears that a M. Ubicini, while travelling in the interior of Brazil, came across a population of negroes who were accustomed to use this remedy with good effect in the cure of syphilis, which was extremely severe among them. M. Stanislas Martin, having received some specimens of the plant from M. Ubicini, has laid them before the Academy of Medicine. In order to assist the labors of the committee of examination appointed by this body, he has published the results of eight experiments made by himself with a view to discover the origin of the bitter taste characteristic of the plant. He has not, however, succeeded in isolating any alkaloid, whether on account of some defect in the method of manipulation or a deficiency in the quantity of the material operated upon.

Further researches enabled him to isolate a green resin, unctuous matter of a citron-yellow color, and brown extractive matter (very bitter, and highly aromatic), tannin, mucilage, glucose (traces), starch, oil, volatile matter, magnesia, alumina, lime, iron, potash, woody matter. The mineral substances are so abundant in this plant that they appear under the form of a white powder when an aqueous decoction acidulated with acetic acid is slightly concentrated. The distilled water of tayuya, and its alcoholic and ethereal tinctures, are highly aromatic. M. Martin does not state what portion of the plant was experimented upon, but promises further details in the coming number of the *Bulletin*. X.

POISONING BY LABURNUM FLOWERS.—I. Clonet contributes to *Le Mouvement Médical*, No. 28, 1875, an article on the poisonous properties of *cytissus laburnum*, from which we abstract the following notes of a case.

A family of Rouen, consisting of seven persons, ate of a batch of fritters containing laburnum flowers, which were used as a flavor on account of their resemblance to those of acacia, which had previously been employed. The flowers alone were used in the dish, the floral peduncles having been rejected. Fifteen

minutes after having eaten the fritters, three of the ladies were seized with a slight feeling of malaise, followed by vomiting, vertigo, and cold sweats succeeded by light fever; then the face became pale, the respiration was accelerated, and the face was expressive of severe pain, augmented from time to time by a succession of spasmodic muscular contractions. After nine hours there ensued transitory languor and somnolence, but this soon passed off, leaving marked insomnia, which lasted through the night.

All these symptoms appeared in five out of the seven persons who had partaken of the fritters, but in various degrees of intensity. One vomited repeatedly during twelve hours, another only two or three times, but in the latter case the other symptoms were more violent. The purgative effect was also very variable. In the case of a vigorous man the symptoms did not supervene until two hours after the repast. In the case of a servant who had eaten the fritters cold, the symptoms did not appear for ten hours. No symptoms of asphyxia were observed in any of these cases.

It results, says M. Clonet, from these facts that the introduction into the organism of about eight grammes of laburnum flowers (the amount taken by each of the persons mentioned) may cause violent emeto-cathartic symptoms, and that consequently the activity of cytisine must be considerable, since eight grammes of the flowers contain only a minute quantity of this substance. The action of cytisine is similar or more severe upon most animals, though upon the horse and rabbit it is said to exercise no effect. X.

COMPRESSION IN HYDARTHROSIS OF THE KNEE.—Compression in the case of hyarthrosis of the knee is usually made by enveloping this joint with cotton wool and then placing a bandage tightly over it. This procedure is defective, since the turns of the bandage become very easily displaced. With a rubber bandage this result need not be feared, but there is here, unfortunately, the inconvenience which constant compression causes the patient, becoming after a time almost intolerable. Struck with these difficulties, M. Guyon has conceived the idea of substituting for this circular compression of the knee the application of the compressing pad of cotton over a gutter which leaves only the anterior portion of the articulation exposed.

The procedure is as follows. The member having been placed in the gutter, successive rectangular folds of cotton batting are placed upon one another until a very considerable thickness is attained.

The circular bandage is passed around the gutter, so that pressure is exercised only upon the anterior portion of the articulation, the posterior and lateral faces being protected by the gutter.

By this means the pain caused by compression of the limb is avoided, and M. Guyon has obtained great success in a number of severe cases of hyarthrosis of the knee.—*La France Méd.*; from *Bull. Gén. de Thérap.*, No. 12, 1875. X.

GOA POWDER IN SKIN-DISEASES.—Dr. Blanc has treated tinea circinata with success by the external administration of goa powder, which destroys the trichophyton with great rapidity. This goa powder, the nature of which is not as yet thoroughly understood, is constituted in great part of chrysophanic acid.

It is employed by simply sprinkling it night and morning over the affected parts, and a cure is obtained by this means in from four to five days. Dr. B. proposes the use of this powder in cases of tinea tonsurans.—*Journal de Thérap.*

M. Gubler has examined specimens of goa powder sent him by M. Limousin. In addition to the usual reactions of chrysophanic acid, of which the powder is

almost entirely composed, he found that, dissolved in ether or alcohol, it imparted an intense emerald-green coloration to the solution. Microscopic examination showed it to be derived from a shrub, holding in its fibres chrysophanic acid, amorphous or crystallized.—*Bull. Gén. de Thérap.*, No. 12, 1875.

X.

MODE OF UNION BETWEEN MUSCULAR FIBRES AND TENDONS.—M. Rauvier makes a communication on this subject to the Société de Biologie, in which he shows that the sarcolemma of the individual muscular fibres terminates in a cæcum which is inserted in, and adherent to, a cup or cavity hollowed out in the tendon. When, from any cause, the muscular fibre contracts, it leaves the cæcal end of the sarcolemma adherent to the tendinous capsule, and the intermediate space appears filled with a gelatinous fluid. The attachment between the sarcolemma and the tendon is either molecular or by means of some sort of cement.—*Le Mouvement Médical*, No. 28, 1875.

X.

PLACENTA OF TRIPLETS.—M. Giraud-Teulon recently showed the specimen and read an account of the following case before the Académie de Médecine. A woman thirty years of age gave birth to three living infants, which, moreover, had survived up to the date of the report. The point of greatest interest was in regard to the disposition of the placenta, the three cords, and the three amniotic sacs.

The placenta formed a single mass, into which the three cords were inserted variously, one being inserted in the centre, one at the edge, and the third on the membranes; vascular communications united each of these cords with the other two. There were three distinct amniotic sacs.—*Bull. Gén. de Thérap.*, No. 12, 1875.

X.

FISSURE OF THE NECK OF THE BLADDER (*Centralblatt für Chirurgie*, 1875, No. 29).—Spiegelberg calls attention to an affection of which he has seen nothing in medical literature, and which he noticed while making a rapid dilatation of the urethra in a woman who has suffered for a long time from persistent cramps of the bladder. The patient's sufferings followed a confinement, and were not lessened by any of the modes of treatment which were employed. The existence of polypi in the neck of the bladder was suspected, and to investigate the parts an Ellinger's dilator was introduced into the urethra and opened. Intense pain was caused, which soon subsided, but no polypi were found. Marked improvement took place, and in a few days another dilator was employed, followed by an intra-uterine speculum. By means of this a granulating spot about one and a half centimetres in length at the uppermost narrow portion of the urethra was discovered. This did not bleed, and healed in five days under cauterization with the nitrate of silver. A similar case, dating also from a confinement, was seen by the same observer, and recovered with similar treatment. The name "fissure" is given to the affection owing to the great similarity which it bears to the condition of the anus which is so called.

W. A.

TRANSPARENCY OF SOLID TUMORS (Prof. Dr. Lücke: *Centralblatt für Chirurgie*, 1875, No. 29).—Transparency has hitherto been regarded as a property of collections of fluid, and looked upon as of great diagnostic value in the examination of hydrocele and cystic tumors. It has, of course, been observed that the fingers, ears, and other portions of the body transmit light to some extent; but, so far as Prof. L. is aware, notice has not been called to the fact that some tumors possess this

quality; and not long ago he made a false diagnosis of a tumor which he examined. A man presented himself with a tumor of the testicle of the left side, which had existed for several months, and which at the time of examination had attained the size of a goose-egg. It was not painful, and the portion of it which corresponded to the epididymis contained some hard, knotty masses, while in the principal portion of it, which was in front, there was a distinct sense of fluctuation, and complete translucency where the light was of moderate intensity. The diagnosis of tubercle of the testicle with hydrocele was made, and the operation of castration was performed. The operator was surprised to find, instead of the fluid which he expected to meet with, a grayish, cloudy, spongy mass, which under the microscope was found to contain sarcomatous elements. The translucency of the mass was retained after its extirpation, and even after twenty-four hours had passed the presence of this quality was still noted. A tumor of this kind, and with these characteristics, could readily be mistaken for a hydrocele: indeed, without the use of an exploring needle an accurate diagnosis would be impossible.

It is reasonable to suppose that the existence of the same characteristic could be established in tumors of many other kinds, if their position in the body permitted an examination: Among these would be lipomata and myxomata, while in those of a cancerous and adenomatous character it would be absent. Prof. L. does not know whether it would be possible, by more accurate observation as to the character and intensity of the translucency, to arrive at more certainty in diagnosis, but considers the subject worthy of investigation.

W. A.

TRAUMATIC INFLAMMATION OF THE LIVER (A. Ulwer-sky: *Virchow's Archiv*, Bd. lxxiii. p. 189).—These investigations were made in the laboratory for general pathology in Kiew, and, for the purpose of exciting inflammation, splinters of wood and twisted silk threads were inserted into the livers of frogs, rabbits, and dogs, and by means of wounds diluted solutions of ammonia were injected into the substance of the same organs. The hepatic cells themselves took no active part in the inflammatory process, but were destroyed in the course of retrograde metamorphosis. The pus-cells did not represent products of the division of liver-cells, but were colorless blood-cells which had emigrated. The new growth of connective tissue which is a product of the inflammation probably had the same origin.

--- THERAPEUTIC NOTES. ---

GONORRHOEA INJECTION (*The Doctor*, July 1, 1875).—Dr. Haberkom recommends the following, in teaspoonful injections, thrown into the urethra two or three times daily:

- R Quinæ sulphatis, gr. vi;
- Glycerinæ, ʒii;
- Acidi sulphurici dil., gtt. v;
- Aquæ, ʒvi.

ITCH OINTMENT (*The Doctor*, July 1, 1875).—Dr. F. W. Clemens warmly recommends the following in cases of itch:

- R Acidi arsenici, gr. ii;
- Potassii carbonat., gr. x;
- Sol. alcohol. saponis, ʒi;
- Aquæ, ʒi.

It is to be rubbed twice daily on the affected parts.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, AUGUST 14, 1875.

EDITORIAL.

THE CASH BASIS.

IN a recent number of the Louisville *Courier-Journal*, a daily paper, is an article of some length, giving an account of and apparently emanating from a meeting of the physicians and surgeons of Oldham County, Kentucky. The chief object of the assembly was to devise means for making patients pay more promptly, or, in other words, the doing away with the present system of long accounts. Concerning the injustice of the present method there can be no difference of opinion: doctors have to pay out with one hand; why should they not receive with the other? We doubt, however, the practicability of completely revolutionizing a rooted custom, although to alter it gradually might be easy. Let a few leading physicians send monthly statements to their better patients, with bills at the end of the quarter, and collect sharply, and much of the difficulty would be overcome. Office-practice and visits to uncertain patients might be paid for upon the cash system: indeed, office-practice in our Eastern cities is already largely upon this basis. A second meeting of the profession is to be held Tuesday, August 17, so as to secure concerted action. Of it the *American Medical Weekly* says, editorially,—

“Will the profession here move as a unit, or will they do as they have often done in regard to a kindred subject (the fee-bill); viz., resolve solemnly, unanimously, etc., etc., that they will do so and so, and then go home and do almost exactly the opposite? There are many

who resolve to charge the rates of the fee-bill, and yet violate the pledge in spirit and in text daily; the honest adherents suffering by their honesty, and the dishonest profiting by their rascality. Will it be thus in this new movement in regard to the cash system? Will the great body resolve so and so again, and then go home and do exactly the opposite?”

Having little faith in concerted action, we believe the profession will do just these things. With us the medical credits during the last few years have been greatly shortened by individual action, and we think that is the only way our Kentucky brethren can save the forty or fifty per cent. of their bills now said to be lost by long credits.

THE “WE”-PRUDE.

MODESTY is ordinarily considered as a virtue, but most men believe it possible for a person to have too much even of genuine modesty for worldly success. This, probably, is true; but many a shipwreck attributed to such an overplus has really occurred upon a very different rock. The diffident, sensitive man is often what he is because he has too little, not too much, of genuine modesty, and of its natural brother,—true humility.

Pride, a fear of making mistakes, a horror of being laughed at, indeed, a form of personal vanity, not rarely make the soil out of which springs the noxious plant excessive diffidence. If a man be really humble, and at the same time be possessed of a little sound sense, he is not over-sensitive to ridicule, and, while willing for effort, accepts its necessary companion, more or less frequent failure.

Modesty whispers, “You are not able for the task; you will fail,” and thereby checks its possessor from unduly taking responsibilities upon himself. It does not, however, paralyze him, since good sense replies to its monitions, “He who makes no mistakes does nothing; if aught devolve on you, do it with all your might, and accept the result, be it good or bad, with humble cheerfulness.”

The greatest cowards are sometimes first in the onset, and the man who acts promptly and boldly often is believed to be conceited, when he really has far more humility than his reserved neighbor who hangs back. Genuine modesty very often hides itself so thoroughly that it is entirely overlooked, but its imitation, prudery, always flaunts itself in the sunlight.

There is a literary affectation to which we wish to-day to call attention, because it is frequent, and because, to our thinking, it is contrary to every canon of good taste and good sense,—is, in fact,

an abomination,—which appears to be especially epidemic among those who contribute to the pages of medical journals. This sin against English, this deflowering of the personal pronoun, is the use of *we* instead of *I*. We object to it because it is in itself bad English; because it is a great promoter of bad English; and because it is a self-glorification rather than a self-abnegation.

First, it is bad English to use a plural pronoun to represent a single person, excepting, of course, the pronoun *you*, which long usage has converted from its original plurality to its present singularity. The editorial *we* is correct, because the writer of the editorial is always *de jure*, and usually *de facto*, speaking for a staff composed of several persons.

Secondly, it is a promoter of bad English. When a person has done anything, or written anything, and means to assert it, it is but a manly, straightforward plan to say, I did so and so. This becomes offensive only when the *I* multiplies itself until it peers out from every corner of the page. There is never any occasion for this endless repetition of the pronoun; indeed, such repetition is, to say the least, inelegant, and is very readily avoided by the use of the passive construction and by other means with which every writer of any skill is familiar. When the author says “I,” he is driven by the very nature of the case to avoid the unnecessary use of the pronoun; but “we” seems so impersonal, that nine times out of ten it leads its employer to clothe his ideas in a slipshod, careless, and dowdy style.

Thirdly, it is a self-glorification, rather than a self-abnegation. The use of “we” enables the writer to veil his personality just sufficiently to allow him to be always forcing himself upon his readers without absolutely becoming disgusting. Moreover, where is the modesty of claiming that any one *ego* is equivalent to two? The modern use of the pronoun “you” has, we believe, grown out of an original desire to do homage, precisely as has “mister,” and precisely as “lady” and “gentlemen” are now doing.

Not to occupy too much space, we beg, in conclusion, to have no more “we’s;” for if sufficient of reasons for abandoning the practice have not been here given, any one having some knowledge of good English can readily furnish others.

THE Government of Great Britain recently requested from the Supreme Medical Council an opinion as to the admission of women to the profession. After a prolonged discussion, the Council

decided that, in their opinion, the study and practice of medicine and surgery by women presented special difficulties, which could not be safely disregarded, but that they were not prepared to say that women ought to be excluded from the profession. As the matter has already been discussed at length in the House of Commons, and as there are both within and without that body energetic men of power urging on the admission of women to the practice of medicine, it is scarcely probable that they will be debarred much longer.

It is stated that Mr. Huxley very rarely attends the meetings of the Royal Commission on Vivisection. The opponents of the practice are, meanwhile, very active, and are appealing through the advertisement columns of the *London Times* for pecuniary aid. The following extract from their advertisement is a curiosity in its way:

“Opponents of the slave-trade agitated not for restriction but abolition. The wrongs perpetrated by man on animals are even more dire than those inflicted by him on his own species. The abolition of slavery was confessedly an act of high Christian philanthropy; and surely it is no less noble or less Christian to stop the sufferings of other helpless creatures of our God.

“The hideous cruelty of dissecting living animals, or inflicting on them, though innocent and defenceless, multitudinous deaths of excruciating and protracted agony, has secretly grown up in this nation,—a nation which for ages past has been nobly distinguished by the courageous and unsanguinary character of its people.

“This moral ulcer has spread widely, and (whether it be or not a dreadful form of insanity) become dangerous and demoralizing to society—a blot on civilization—a stigma on Christianity. The public has little idea what the horrors of vivisection are: its crimes in studied, ingenious, refined, and appalling torture, in wantonness, uselessness, and wickedness, cannot be surpassed in the annals of the world. It therefore calls for extirpation by the Legislature, cruelty being not only the worst of vices in itself, but the most retributive to mankind, more especially when perpetrated by the refined and educated.”

It is stated that the Board of Governors of the Presbyterian Hospital of New York City have come to an understanding with their original medical staff. Exactly what has been agreed upon has not yet been made public.

A SCHOOL for nurses is to be opened at Charity Hospital, New York. The course is to be of two years’ duration.

THE press; in all civilized communities the almatrater of charlatanism.—*Gazette Hebdomadaire.*

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—While reading your able editorial review of "Circular No. 8," in a late number of your valuable magazine, the thought occurred to me that your remarks were equally applicable to the hospital steward of the army. He is required to be (see Woodward's Hospital Steward's Manual) "of honest and upright character, of temperate habits, and good general intelligence. He must have a competent knowledge of the English language, and be able to write legibly and spell correctly. . . . In addition, he must have sufficient practical knowledge of pharmacy to enable him to take exclusive charge of the dispensary, must be practically acquainted with such points of minor surgery as the application of bandages and dressings, the extraction of teeth, and the application of cups and leeches, and must have such knowledge of cooking as will enable him to superintend efficiently this important branch of hospital service." And, after requiring us to be clerks, druggists, nurses, dentists, and *cooks*, a generous government allows us *thirty dollars a month* as a recompense for our many duties of such different natures and the knowledge required to perform them.

Ordinance sergeants and commissary sergeants, both of whom rank the same as stewards, receive four dollars per month more; and they are but storekeepers, who are not required to have the least professional knowledge.

I claim that the rank of steward is the only non-commissioned one that is strictly professional, and as such should receive a recompense in proportion to the knowledge and experience required to perform the duties of the position.

I also consider that there is no comparison between the responsibility of a steward and other non-commissioned staff officers; the balance of life and death is with him quite as much as the surgeon, for in the careful execution of his superiors' orders rests the recovery of the patients placed under his control.

We, as a corps, have waited long and patiently for justice from the hands of Congress, and many have become discouraged, and by the much better prospects have returned to civil life, and are now in flourishing circumstances. But, instead of doing for us what was our due, Congress has placed us even beneath those with whom we hold military rank.

The navy has recognized the claims of her subordinates in the medical department by giving her first-class apothecaries sixty dollars per month, and an allowance for rations that completely leaves us in the background.

I have enclosed a copy of a bill* prepared by one

of the corps, assisted by the ideas of others, and reviewed and approved by his surgeon. It is only put forward as an idea to be improved upon, with the hope that some one may take an interest to see something done in justice to those who have served faithfully and honestly for so small a return. While the medical department are striving to better their own condition, let them not forget their subordinates, upon whom they must depend for much of their success, by faithful and hearty co-operation.

CADUCEUS.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JUNE 10, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

Lipoma.

DR. H. ALLEN presented the specimen, from A. D., aged 45, who noticed a wart-like growth from left popliteal space twenty years ago. The tumor was distinctly pedunculated, and was about the size of a duck-egg. It was without pain; the only annoyance its presence gave the patient arose from its liability to contusion.

Dr. J. E. MEARS recalled a case of tumor which was probably of similar character, also in a woman about sixty years old. In this case the mass took its origin in the left inguinal region, and extended between the thighs as low down as the knees. It was attached by a

ards shall be made; but that thereafter the Secretary of War, upon the recommendation of the Surgeon-General, shall appoint a sufficient number of Hospital Stewards to supply one to each post, and the necessary clerical force for the different headquarters. Such appointments to hold good during the pleasure of the Secretary of War, and with rank next to and after Second Lieutenants.

"SEC. 2. That upon the thirtieth day of June, eighteen hundred and seventy-six, all Hospital Stewards shall be honorably discharged the service of the United States, except those who may be awaiting trial by court-martial. Provided that such of the Stewards now in service as may be recommended by the Surgeon-General, shall receive appointments as Hospital Stewards from the Secretary of War.

"SEC. 3. Be it further enacted: That from the first day of July, eighteen hundred and seventy-six, the monthly pay of Hospital Stewards of the Army, appointed under this Act, shall be fifty dollars; and for every five years' service they shall be paid ten per centum of their monthly pay in addition thereto. Provided that the total amount of such increase for length of service shall in no case exceed forty per centum on the monthly pay established by this Act.

"SEC. 4. And be it further enacted: That for disability contracted in the line of duty, or after thirty years' service, a Hospital Steward may be discharged from active service upon the recommendation of the Surgeon-General, and his name be placed upon the rolls of the army as being so discharged, and shall be entitled to seventy-five per centum of his actual pay at the time of discharge. Provided that he shall be held amenable to all the regulations of the Army and the Articles of War, and that he shall be granted the privilege of selecting his place of residence in the United States, and shall be subject to such orders as may be issued for his guidance.

"SEC. 5. And be it further enacted: That the allowance of quarters, fuel, rations, and clothing for Hospital Stewards of the Army shall be as now fixed by law.

"SEC. 6. That nothing in this Act shall in any way change existing laws relating to Hospital Stewards of the second or third class.

"SEC. 7. That all Acts or parts of Acts inconsistent with this Act are hereby repealed.

* "AN ACT TO FIX THE RANK AND PAY OF HOSPITAL STEWARDS OF THE ARMY.

"SEC. 1. Be it enacted by the Senate and House of Representatives of the United States in Congress assembled: That after the first day of July, eighteen hundred and seventy-six, no more enlistments of Hospital Stew-

pedicle as thick as the wrist, and in its structure appeared dense and in all respects similar to that of Dr. Allen. It had been examined by a number of surgeons, and by some thought to be a large inguinal hernia. A vaginal examination and an exploration of the bladder showed the latter and the uterus to be in proper position.

The specimen was referred to the Committee on Morbid Growths, which reported June 24, 1875, as follows: "The tumor is a simple lipoma, with a denser aggregation of fibrillated tissue towards one end."

Embolism of the middle cerebral artery, with abscess in the fissure of Sylvius.

Dr. MORRIS LONGSTRETH presented the specimen.

Exostosis of lower jaw.

Dr. JOHN ASHHURST, Jr., presented this specimen, which was removed from the lower maxilla of a young girl. The tumor grew from the base of the jaw on the left side, near the angle of the bone, projecting downwards and outwards, and causing quite a marked deformity. The growth, which was pedunculated, was removed without external incision, the operation consisting in freely dissecting off the cheek from the bone, through the mouth, and then severing the attachments of the tumor with strong cutting forceps. The great advantage of this plan of proceeding was that the wound required no dressing, and that there was left no external scar. The exostosis was of the cancellous variety, and, as often happens with these growths, was covered on its external surface with an adventitious bursa.

Solid enlargement of the bursa patellæ.

Dr. ASHHURST also exhibited this specimen, removed from a young woman who had been suffering from the affection for more than a year. The great density of the tumor rendering it evident that any less radical mode of treatment would be useless, the growth was excised, its careful dissection from the subjacent tissues being much facilitated by the use of Esmarch's bandage. An incision into the mass after its removal showed a cyst-wall nearly half an inch thick, and of almost cartilaginous hardness, the fluid contents of the cyst consisting of a small quantity of a thick synovial-like liquid.

The specimen was referred to the Committee on Morbid Growths, which reported, June 24, 1875, as follows:

"The body removed by Dr. Ashhurst is evidently a proliferating mass of connective tissue springing from the synovial membrane. It is everywhere fibrillated, with the exception of a few points where it is hyaline, and encloses the characteristic mother- and daughter-cells of cartilage."

On the anatomical differences between carcinoma, sarcoma, etc.

Dr. JOHN ASHHURST, Jr., also made a verbal communication upon this subject, prefacing his remarks by saying that after the last meeting of the Society he had found from a conversation with Dr. Tyson that what he had said upon this topic had been misunderstood, and that he thought it right therefore to recur to the subject, and to try to make plain what he considered were the points relied upon by modern pathologists in drawing a distinction between these different forms of morbid growth.

Dr. Ashhurst took, for purposes of comparison, the common fibrous and fibro-cellular tumors (*fibroma*), the fibro-plastic or recurrent fibroid tumor (*spindle-celled sarcoma*), and the scirrhous or hard cancer, which might be considered a typical *carcinoma*. Illustrating his remarks by diagrams drawn upon the blackboard, Dr.

A. said that the fibroma and sarcoma were both tumors of the connective-tissue type, but that in the former the *intercellular substance* was at a maximum, there being very few if any *cells* (connective-tissue corpuscles) to be observed, and these, perhaps, only rendered apparent by the application of acetic acid, while in the latter the cells were at a maximum, and the intercellular substance at a minimum; still, no matter how rich a sarcoma might be in cells, an intercellular substance was invariably present, and with this the cells were in *constant relation*, this being, indeed, the distinctive difference between the sarcoma and the carcinoma. In the latter there was a distinct *stroma*, which might itself be a new formation,—the stroma of encephaloid often contains spindle-shaped cells,—or, as in the case of many scirrhous growths, might be simply the connective tissue of the part in which the carcinomatous material was deposited; but, in either case, in the interstices of the stroma cells were massed together *without any recognizable intercellular substance*.

That this, and not the mere presence of a stroma, was the true and only trustworthy distinction between these two varieties of tumor, was shown by the fact that in the so-called *alveolar sarcoma* there was a distinct stroma which might readily mislead the observer into supposing that he had before him a true carcinoma, and that the real nature of the growth could only be recognized by perceiving that in the alveoli the cells were in constant relation with an intercellular substance. On the other hand, when in any part of a sarcoma the development of cells was so rapid as to cause the disappearance of the intercellular substance, that portion of the growth became truly carcinomatous, and the whole tumor was then called a carcinomatous sarcoma.

In concluding his remarks, Dr. A. said that though fully recognizing the desirability in a scientific point of view of having an accurate anatomical classification of morbid growths, and though acknowledging the great convenience attaching to the use of the term sarcoma, he yet thought that it was too indefinite, in view of the varied significations given to it by different authorities, to merit general adoption by practical surgeons.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting held March 11, 1875, the President, Dr. WILLIAM GOODELL, in the chair,

Dr. W. R. D. BLACKWOOD presented a *renal calculus* from a case in his practice. The patient had been recently confined, and ten days after delivery she was seized with the symptoms of the affection, and suffered intensely for thirty-six hours, notwithstanding the use of large doses of morphia hypodermically. The pain was finally controlled by the injections, and the internal use of chloroform. The calculus was of large size, but created no irritation in the bladder, and was voided painlessly at stool. She is now suffering from the descent of a calculus in the left ureter, the first having passed down from the right kidney.

Dr. TYSON, chairman of the committee to whom the calculus was referred, reported that the committee found it composed throughout of oxalate of lime. It is, therefore, a typical mulberry calculus.

Dr. I. S. ESHLEMAN related a case of *placenta prævia*. He also referred to a case which he had presented to the Society a few months ago, published in the *Medical Times* of the 20th of March, in which he had delivered the mother safely of a living child, giv-

ing the mode of management which he has for several years practised. He prefers the obstetrical forceps (head first) to turning. He uses them to arrest the hemorrhage, dilate the os uteri, and deliver.

The patient was Mrs. M., residing near Roxborough, seven miles distant, in the suburbs of the city. She became enceinte in the first week of August last. About four weeks after, on a Tuesday, she experienced a slight hemorrhage. After four months had passed she had a second hemorrhage, coming on, as the first, on a Tuesday. Subsequently, there was a flow of blood on every Tuesday for five weeks, and after this on every Friday for three weeks; then every Saturday for two weeks a free hemorrhage occurred. On the following Thursday a more severe flow occurred, lasting until the following day at 2 P.M. On the following Thursday morning, March 4, 1875, the most copious hemorrhage began, within one week of the seventh month. In this condition her husband brought her into the city to her mother's house, in a large close Germantown wagon, which ran on the Ridge Avenue railway, a fresh fall of snow having smoothed the way in some measure. He (Dr. E.) then saw her for the first time. The friends exhibited a bushel-bag filled with well-stained cloths, the result of that morning's hemorrhage. Her face was pale and pinched, and the skin shrivelled as in cholera. Brandy and milk were freely administered. Examination per vaginam verified the diagnosis of placenta prævia. The os was half an inch in length, but soft, and the index-finger could be pressed through the neck and into a crevice in the placenta which dipped down in a line with the os to its foetal surface. The walls of this crevice were continuous with those of the uterus, no separation of the placenta being observed. Exploration exterior to the os gave the sensation of placenta as far as the finger could reach. It was his impression that he had to deal with a case of central implantation of the placenta. No hemorrhage was provoked by this examination carefully made. From beginning to end, the mother experienced no labor-pains. He had never known labor-pains, that could be felt by the mother as such, in placenta prævia, nor in detached placenta, but instead had observed a continuous contraction, which he regarded as an effort of nature to prevent hemorrhage. But even this is not usually felt by the mother after much loss of blood. A little more time was considered proper in order to replenish the supply of blood and obtain reaction. In this condition immediate hemorrhage was not to be apprehended: so he went home for instruments. A convulsion caused him to be hastily summoned to the house again, taking with him such instruments as would be likely to be needed in case tamponing should be deemed necessary; also, Barnes's and Molesworth's dilators. (Ice-cold douches were ordered to be in readiness previously.) The convulsion was over when he arrived. It had lasted for about ten minutes. A half-drachm of chloral was given immediately. He had used it in all forms of convulsions, since its discovery, beginning with the infant at birth; in the puerperal variety he had never known it to fail, and in general its use had been most satisfactory. (He had recently dismissed himself from a consultation in a mild case of post-partum puerperal convulsions because the doctor in attendance would not consent to the administration of chloral, and he (Dr. E.) would not share the responsibility unless it should be given. A few days revealed crape at the door of the young husband's beautiful mansion.) If blood-letting alone were sufficient, why did this patient (Mrs. M.) have a convulsion when she was exhausted from loss of blood? Examination showed that during the spasm she had lost a few ounces from slight additional separation of the placenta around the os, but the flow had ceased. The os was now more relaxed or less

bound by the placenta. Symptoms of return of convulsions called for twenty grains of chloral additional. He also administered ergot, to insure contraction after delivery. Brandy and milk were given freely. To tampon properly would so distend the vagina as to complete the separation of the placenta, which he desired to avoid, as he had resolved to deliver through the placenta, knowing that at the first indication of recurring hemorrhage he could at once proceed with his fingers or his dilators to tampon and dilate at the same time sufficiently to admit the forceps. Here he watched the case very closely for two hours. During this time her condition improved, while the os had grown soft and dilatable. Depleted as she was, efficient labor-pains were not to be expected, and feeble pains could now produce only gradual separation of the placenta, and hemorrhage. To introduce the hand and turn would usually require forcible dilatation of the os to a diameter of about three inches. This would produce almost or perhaps altogether complete separation of the placenta, and do great violence to the os, and be followed by the often fatal operation of turning the child, which places its long diameter in the short diameter of the uterus. It would be to witness great agony and hear the suffering mother plead for death. The woman was too weak to indicate an anæsthetic. The uterus now showed signs of firmer contractions or a firmer condition of the tumor when handled. Ergot was doing all that could be expected in her enfeebled condition. There was reason to hope that the organ would now contract after delivery, if not paralyzed by the operation of turning, and if delivered with the forceps by intermittent efforts in imitation of nature. Gentle pressure upon the abdomen was made by my assistant, while one finger and afterwards two were easily passed into the os. The speculum forceps were next entered and passed up into the fissure found in the placenta, which carried their points onwards against its inner foetal surface, when, with gentle pressure and a boring motion, they entered the amniotic sac, from which the water flowed. The handles were forcibly separated, making an aperture of about two inches in the placenta. This began at the insertion of the cord, immediately over the os, and extended towards the mother's left. The obstetrical forceps were now employed, but, owing to this opening in the placenta, extending to the mother's left, the second or right-hand blade was displaced in that direction, falling also upon the left side of the child's head. He withdrew the instrument, and, applying first the right-hand or female blade, and following it with the other, grasped the head in the first position. He was able, in the attenuated condition of the patient's form, to rock the forceps from side to side, and, by placing his hand upon the abdomen, verify their proper application. He immediately brought the head down into the pelvis firmly upon the placenta and the os uteri.

No considerable hemorrhage attended this operation, which was done in about the time consumed in relating it, but without undue haste. Here he felt that the case was under his control, so far as the safe delivery of the mother was concerned. No further hemorrhage was possible, and if the os yielded to the equable pressure upon the placenta, delivery would be readily effected. The child was small (premature, as usual). If the os did not yield, moderate pressure upon the interposed placenta must arrest hemorrhage, and prevent further separation of the placenta than necessary to admit of dilatation. The child had exhibited no signs of life for twelve hours. Failure to secure uterine contraction after delivery might complicate matters. But traction upon the forceps caused the womb to respond, as shown by hardening of the tumor. The case was conducted in imitation of natural labor, as every forceps case should be. There can be no excuse (in most instances)

for rupturing the perineum with the forceps on the child's head. On the contrary, the instrument may be made supporters of the perineum by restraining the expulsive force of the uterus. If necessary, between pains, bilateral incisions into the labia, however slight, will magically relieve an unyielding vulva, and the obstetrician will be puzzled to find them after the child is born. The child was delivered in about thirty minutes; it could have been effected in ten had it been alive; but, being under seven months, there would in that case have been small chance of its living. No perceptible hemorrhage followed, and the uterus closed softly upon the hand inserted within its cavity. The placenta remained adherent in its entire circle. This his assistant was called to witness. Its centre was extensively separated and crushed, a portion being pressed off by, and descending with, the child's head. External pressure and grasping with the hand consolidated the uterus as the placenta escaped from its cavity. The membranes were unbroken, and contained some fluid. The aperture through which the child was delivered extended from the insertion of the cord to the edge of the placenta, and was about three inches in length, as if too small for the passage of the child.

The mother uttered no complaint during all this time, and said she did not have a pain. She had given birth to four children previously; none so easy.

He prefers the forceps to turning in these cases. He finds, usually, a free edge of the placenta, and, after hemorrhage, a dilatable os, so that when able to introduce two fingers the forceps can be applied; and, having grasped the head, sufficient pressure can be made upon the placenta to control hemorrhage, and at the same time dilate the os and effect a much earlier delivery, upon which, in a great measure, the lives of mother and child may depend. His prejudice against the operation of turning has not been lessened by the very great difficulty that he experienced, since treating this case, in turning a large child on account of a narrow conjugate diameter of the pelvis, which procedure was followed by an attack of metritis, from which the patient almost lost her life.

Dr. NEBINGER asked how far pregnancy had advanced (in the placenta-prævia case).

Dr. ESHLEMAN. Six and three-fourths months.

Dr. NEBINGER. Do you say you never knew decided labor-pains in placenta prævia?

Dr. ESHLEMAN answered that he had never witnessed ordinary labor-pains, and that his patients had always declared they did not feel any, even though the uterus felt hard. But when traction is made upon the forceps, the womb contracts freely, even though the woman might be exhausted by hemorrhage.

Dr. NEBINGER asked whether this treatment would be practised at all periods of gestation.

Dr. ESHLEMAN said he had never employed the forceps earlier than the sixth month. Whenever he obtains dilatation of one and a half inches, and finds the free edge, or thinnest portion, of the placenta, towards which the separation inclines, he completes the track and applies the forceps, whether the os be rigid or soft, and then brings the head to bear upon the placenta. This done, he finds the hemorrhage cease. He has never torn an os.

Dr. NEBINGER asked whether he would use this treatment at eight or nine months; and how much blood had been lost by this course.

Dr. ESHLEMAN replied that in the former case, which he saw early, during the first free hemorrhage, at the eighth month, probably from a pint to a quart had escaped prior to the application of the forceps, but not an ounce afterwards. The child was resuscitated, and lived. The mother showed no unusual exhaustion, and did well. In the latter case, probably four ounces had been lost

during the convulsions, but none during the delivery. This woman had lost a pint or more of blood suddenly every week for three months without using any means to arrest the flow.

Dr. NEBINGER asked whether, supposing that at eight and a half months the hemorrhage being so profuse that exhaustion was positive, and the bleeding continuing, he would then apply this treatment.

Dr. ESHLEMAN did not remember ever treating a case advanced to eight and a half months. Unless the placenta be located very partially over the os, labor will come on earlier. Nor does he think hemorrhage would continue with exhaustion. He never so found it. He would proceed, applying the forceps if the os would admit, during hemorrhage, as he could arrest most quickly and completely prevent future hemorrhage by this means. Delivery may be accomplished very slowly after the application of the forceps, giving ergot and stimulants ample time to act in cases of great exhaustion. But the child would be likely to perish under such circumstances. Tamponing (with the delay incident to it) lessens the child's chances for life.

He said that turning is acknowledged to be a hazardous practice to the mother as well as to the child. Statistics amply prove this. He does not feel safe in relying upon the tampon, so rapidly does the vagina expand, dilating the os, and separating unnecessarily the placenta. The tampon also induces heat and inflammation of the parts.

Dr. WELCH asked Dr. Eshleman whether he tamponed before dilatation.

Dr. ESHLEMAN said such had been his practice, but he did not in the last two cases. The former he had once delivered, having a dilatation of one and a half inches. The latter having just experienced a hemorrhage, he did not apprehend another very soon; nor should he have had a recurrence but for the occurrence of the convulsions, which separated a portion of the placenta. He sat down prepared to operate with the first symptom of reaction or hemorrhage. He waited two hours, and delivered without loss of blood. In answer to Dr. Goodell, Dr. Eshleman said he had always found trouble in using dilators, in keeping them in proper place. Had hemorrhage occurred in the latter case before he obtained sufficient dilatation or a dilatable condition, he would then have tamponed or dilated, but not to more than a two-inch diameter, for fear of separating the placenta, when he would have applied the forceps to compress the placenta, dilate the os, and deliver.

Dr. NEBINGER remarked that the practice of Dr. E. was new to him; that it might be good practice, and better than that which he had pursued in placenta prævia, yet he felt that he would prefer to depend upon a practice which he had found useful, and which had the endorsement of the highest authority, both at home and abroad. In illustration of the practice referred to, he would briefly narrate a case which occurred in his practice.

Mrs. —, residing in the Neck, or rural portion of the southern section of the city, was seized with a slight hemorrhage from the uterus on a Friday. She was in the ninth month of her pregnancy. He was sent for; when he reached her, she was up and moving about her house, the hemorrhage having been but slight, sufficient only to alarm because of its being unusual, and at a time anterior to the period when she expected her term to expire.

The patient was directed to go to bed. An examination was instituted, and placenta prævia diagnosed. The vagina was well tamponed with small pieces of sponge, and the lady directed to keep her bed. The following day, Saturday, she was visited, and the sponge removed. There had been but very little hem-

orrhage, not sufficient to soil all the pieces of sponge placed in the vagina. The os uteri had slightly dilated, say to about the extent of an inch. The vagina was again packed with small pieces of clean sponge, and the patient directed to remain in bed.

She was visited on Sunday morning, and the sponge removed. There had not been anything more than a very slight leakage, not more than there had been during the previous twenty-four hours. A slight increase in the dilatation of the os uteri was manifest. Fearing that the further continuance of the sponge might produce some vaginal irritation, he determined not to again pack the vagina, but instructed the nurse that in the event of hemorrhage she should force as many pieces of sponge into the vagina as possible, and at once dispatch a messenger for him. About 5 o'clock on Sunday afternoon he was summoned to visit his patient. Her residence was at least two miles from his home. He responded promptly to the call. When he reached the bedside of the lady, he found that the nurse had in the matter of the introduction of the sponge so limited complied with his directions that she had not effectively accomplished anything. The hemorrhage had been very great, and was still going on. The lady's face was blanched, pulse very small, skin damp, and the whole aspect such as to excite great fear for her safety. Whisky, in positive quantities, at short intervals, was administered, the vagina cleared and well packed with sponge. Milk-punch was in due season substituted for the whisky, and as much administered as the patient could take without producing sickness at the stomach. The lady reacted slowly. After the reaction was established, she complained of labor-pains. The pains increasing in severity, and the intervals between them diminishing, the doctor recognized that the period was approaching when it would be proper to effect the delivery of the babe. Feeling that the interests of the patient and his own professional interest required that he should summon to his assistance and counsel a professional brother, he, at 2 o'clock on Monday morning, sent an invitation to Dr. Ellerslie Wallace to come to his assistance, to share with him alike the responsibilities and the toil. The doctor very promptly responded. When Dr. Wallace arrived, it was manifest that expulsive pains were present by the disposition the patient had to bear down, and by the distention of the vulva by the forcing down of the sponge. The use of the milk-punch was continued, and the administration of ergot was commenced to increase the expulsive force of the uterus, so that when the delivery of the child should be effected there might be such strong and prompt contraction of the uterus that there would not be post-partum hemorrhage. At 5 o'clock, about two hours after Dr. Wallace's arrival, the conditions were such as caused the doctors to determine to remove the sponge from the vagina, and, if practicable, deliver. Upon the removal of the sponge Dr. N. said he found that the os uteri was well dilated, and the placenta entirely covered it. Passing the right hand between the placenta and the uterus, it was then passed into the uterus until the feet of the babe were reached; these were then grasped, and version commenced.

The delivery of the child was effected without any delay from resisting soft parts, or from the head assuming an abnormal position in the pelvis. The expulsion of the placenta followed immediately the delivery of the head. The uterus contracted promptly and forcibly. The amount of blood lost did not exceed four ounces. The child was dead. The mother made as good and prompt recovery as could have been expected under the circumstances of her exhausting and dangerous labor.

Dr. Nebinger said he felt confident that if he had

attempted delivery by the use of the forceps, as described by Dr. E., or in any other manner, before his patient had reacted, he would not have achieved the good results he did. He felt that the indications, the urgent indications, were the arrest of the hemorrhage, the establishment of reaction, the holding up of the vital forces until delivery was effected, and the prevention of post-partum hemorrhage. These indications were met, and, as their result, a safe delivery of the lady. To him, the doctor said, the practice appeared good, and upon it he had relied in the other cases of placenta prævia which had occurred in his practice, which were, however, not many, as he could count upon the ends of four fingers all his own cases.

Something, Dr. N. remarked, had been said of the inefficiency of the tampon. He feared that where the tampon had not been used with good results, it might have been either because of the imperfect manner in which it was applied, or because of the material used. He gave the preference to sponge. To effectually tampon, he had found it necessary to reduce the sponge to small pieces, and to introduce them one by one, not merely until the os externum, or vulva, be, as it were, occluded, but until the vagina is most thoroughly and positively packed. Such a tampon had never failed to serve him well, and such a tampon he had employed with success over and over again, in more instances than he would name, to arrest hemorrhage in cases of abortion; and now, looking back upon the past, he was gratified with his experience, and felt that its results were such as to justify him in having recourse to the same practice in the future.

Dr. WILLIAM T. TAYLOR said,—"I have had but few cases of placenta prævia, but I can call to mind one in which there was a very profuse hemorrhage, so as to render the patient very pallid, her pulse being very weak and small. As the os was covered by the placenta, I tamponed her with rags, which arrested the flow, except some slight oozing. Having given stimulants and waited for an hour or more, the pains had increased so much that the tampon was removed. The os being well dilated, a full dose of wine of ergot was given, and, having passed my hand between the edge of the placenta and the uterus, I brought down the feet and body of a small child; in a few minutes the arms and head were delivered. It was quite exhausted, but soon cried vigorously. I mention this case because the child lived."

REVIEWS AND BOOK NOTICES.

REST IN THE TREATMENT OF NERVOUS DISEASES. By S. WEIR MITCHELL, M.D. G. F., Putnam & Sons, New York.

This brochure constitutes one of the series of American clinical lectures now being published under the editorial management of Dr. Seguin. We have read it with very great satisfaction, and when we say that it is one of the best contributions Dr. Mitchell has made to practical medicine, we award it, in our opinion, the highest praise. We find only one fault: too much is attempted in a small space. When the author returns from his absence abroad, we trust that he will expand it into a moderate volume. In the mean while, we say to our readers, Read this lecture, and you will find its therapeutic suggestions invaluable.

THE ABUSE OF MATERNITY. By ELIZABETH EDSON EVANS. J. B. Lippincott & Co., Philadelphia, 1875.

This little book is upon a subject which has been much written about of late. It owes its chief interest to the extremely feminine point of view which its author

holds, and to the fact that she is seemingly possessed of more common sense than most of the writers upon such subjects, in that she has a section "On the Abuse of Maternity through its Unwise Acceptance." Her method of escaping the logical results of the opinion that it is not at all times the duty of woman to breed as often as possible, is certainly original and amusing. It is sufficiently indicated in this sentence, "Again, the poor ought not to marry." Although such utterances as this are, to our thinking, practically absurd, yet we feel like praising our authoress very highly for much of sound common sense put forth with common honesty. It seems to us self-evident that "there is no virtue in bringing into the world a mass of puny, weak-minded, and vicious beings;" but then it requires a good deal of moral courage to say so at present.

SELECTIONS.

ARTIFICIAL RESPIRATION IN APOPLEXY.—In a recent number of the *Gazzetta d'Italia*, Dr. Corso, the assistant to the chair of Physiology at Florence, advocates the use of artificial respiration in cases of "fulminant" apoplexy, and of compression of the brain by hemorrhage or other causes. The immediate cause of his remarks was a case related in the same paper, in which a Dr. Despalles, of Brussels, employed the inhalation of oxygen in a case of apoplexy with hemiplegia with a successful result, the sensibility and power of movement returning in four hours. Dr. Corso claims that artificial respiration was first employed for apoplexy in Prof. Schiff's laboratory, and quotes the opinion expressed by Schiff in his lectures on the nervous system, published in 1866, that in cases of fulminant apoplexy produced by paralysis of the medulla oblongata, artificial respiration should be used, and never bloodletting. In 1871, Schiff also made numerous experiments on animals, and established the fact that the only way of preserving animals suffering from apoplexy, due to compression of the brain, from certain death, was artificial respiration. The explanation of this fact is that the immediate cause of death is paralysis of the respiratory centres by compression of the medulla oblongata, and the consequent non-oxygenation of the blood. The advantage of artificial respiration over the inhalation of oxygen is that it lowers the pressure of the blood in the intra-cranial vessels, and thus lessens the tendency to further hemorrhage.

In support of these views Dr. Corso relates a case in which he claims to have employed artificial respiration for the first time in such cases in the human subject. It was that of a lady who fell backwards and sustained a fracture of the skull. When seen, she was cyanotic, insensible, breathing slowly and superficially, the pulse also was infrequent and very feeble, and death seemed imminent. Artificial respiration was immediately performed, and continued for twenty minutes; under its influence the heart's action increased in force and frequency, the respiration became natural, and consciousness returned. The patient did not, however, completely recover, but died fifteen days afterwards from the laceration of the brain caused by the hemorrhage and fracture. Dr. Corso points out that had it not been for the irreparable lesions produced by the injury, the patient would have lived, and that the artificial respiration gives the brain and the medulla oblongata time to return to their normal functions, and hence a better chance of recovery, at any rate from the immediate danger.

There is no question that in many cases of coma due to compression of the brain, and also in that produced by opium or alcoholic poisoning, artificial respiration

might be used with advantage; perhaps also in cases of so-called "congestive" apoplexy; but it seems to us open to grave doubt whether it would be applicable to cases of severe cerebral hemorrhage. The fear of increasing the hemorrhage should make us hesitate to adopt it until clearer proof is given that the restored action of the heart would not increase the pressure in the cerebral arteries and destroy that quiescence in which seems to lie the only chance of recovery in many cases. The difficulty in diagnosing the exact cause of the apoplexy will also stand in the way of any general employment of this method, except where it affords the only chance of obviating immediate death.—*London Lancet*.

REPEATED SPONTANEOUS GANGRENE OF THIGH.—A widow 66 years of age had, following a pneumonia in April, 1870, a thrombus in the left popliteal artery. This caused gangrene of the limb, for which Prof. Estlander, on the 3d of May, amputated the leg at its upper third, finding the arteries atheromatous and the popliteal plugged by a thrombus, though the arteries of the leg were free. The treatment lasted till August, in consequence of gangrene of the flaps, and the patient was then discharged cured. She returned to the hospital October 6, 1873, having continued well till within two weeks, at which time gangrene recurred in the cicatrix of the stump and began to spread up the thigh. On examination the left thigh was found to be much thicker and fatter than the right; the slough extended on the outer side only about a hand's breadth above the knee, but on the inner side half-way up the thigh, without a distinct line of demarcation. On the 13th of October, as the extension of the gangrene had apparently ceased, amputation of the thigh was performed, during which it was noticed that the subcutaneous fat-tissue was solid and stiff, like that of a frozen cadaver, so that it was difficult to fold the flap. In the portion removed by the operation, the popliteal artery was found obliterated as far up as the tendon of the adductor magnus, corresponding to the extent of the thrombus discovered three years previous. With the exception of a slight tendency to gangrene in the skin of the flap, everything progressed well, and the patient was dismissed cured, February 19, 1874. Several days before leaving she said that everything she ate seemed to go into the stump, which again became much fatter than the remainder of her body.—*Finska läk. sällsk. handl.* and *Nord. Med. Arkiv.*, vol. vi. No. 3; *New York Medical Record*.

ABSOLUTE REPOSE IN TETANUS.—Prof. E. de Renzi draws the following conclusions from his observations of tetanus:

1. Light renders the tetanic contractions of animals and man more frequent and intense.

2. It can be demonstrated experimentally in animals, that absolute repose, during the absence of all stimulus, retards the tetanus and renders it less fatal.

3. Of three cases of severe tetanus, treated almost exclusively by absolute repose, two cases were cured. The patients were kept isolated in a dark room; all noise or other stimulus or irritation was avoided, except such as was caused by the administration of food and beverage at long intervals.

4. In one case death resulted, notwithstanding the administration of large doses of hydrate of chloral and several hypodermic injections of worara. It would appear that the chloral increases the difficulty of respiration, which is already affected by the disease.

5. In the actual condition of science, absolute repose shows itself to be the principal remedy in the treatment of tetanus. The removal of stimulus should, however, be as complete as possible, and be recognized as an important accessory.

6. In two cases of traumatic tetanus, the first severe

tetanic manifestations occurred a few hours after the amputation of the injured limb. This shows that amputation, instead of impeding the further development of the disease, renders it more intense from the irritation of the nerves of the amputated part.—*Gaz. Med. Ital. Lomb.*, January, 1875; *New York Medical Record*.

GLEANINGS FROM OUR EXCHANGES.

THE OBSTETRIC FORCEPS AS A TIME-SAVER (*The Boston Medical and Surgical Journal*, July 1, 1875).—Dr. George E. Francis reports three hundred cases of labor which were completed within two hours after dilatation of the os, and in which the forceps were used fifty-one times, or once in six cases. There were three hundred and one children, all born alive but four.

Three of the mothers died; one of them was at the point of death when first seen, probably from pulmonary thrombosis, and the child being nearly born was safely extracted at the very moment its mother died. Another had erysipelas when labor set in, and died of blood-poisoning; the third was apparently exhausted by a very long first stage in which no interference was permitted; by the time the os was dilated she was in high fever. There have been no deaths in the one hundred and seventy-nine women last delivered. While it is true that the forceps was used in all three fatal cases, he sees no reason to think that the operation affected the results in either of them.

After delivery the perineum was always examined, and in but one case, which by the way was not instrumental, was there found sufficient tearing to need a stitch.

The application of the instrument rarely gave any more pain than the previous digital examination, and never required anæsthesia.

The catheter was not once required either during or after the confinement.

PENETRATING PISTOL-SHOT WOUND OF ABDOMEN—PASSAGE OF BULLET PER RECTUM ON FOURTH DAY—RECOVERY (*The Medical Record*, July 17, 1875).—Dr. William O'Meagher reports the case of an able-bodied man, who was shot in the umbilical region; the ball, from a No. 1 Smith & Wesson revolver, entering his abdomen. When first seen he was lying on his back in bed, complaining of pain, faintness, and chill, and restlessly moving from side to side. Without any unnecessary delay in vain efforts to find the bullet, the wound was cleansed, and closed by a compress of old linen, wet with cold water, covered with oiled silk, and kept in place by a broad bandage, tightly applied. During the examination and dressing he vomited freely about a quart of partly digested food and beer, in which, after careful examination, neither blood nor bullet could be detected. An opiate, combined with an alkaline diaphoretic, was freely administered, and ice, with carbonated water, allowed in small quantities to allay thirst. Directions were given to examine the excretions closely, and absolute rest on the back, with the knees in the flexed position, enjoined.

The next day he vomited a little, and on the day following had a chill, followed by symptoms of peritonitis. A bag of powdered ice was applied to the wound, and five grains of Dover's powder, with a grain of calomel, were administered every three hours. On the third day he was much better, and had an oleo-terebinthinate enema; and on the fourth day, having greatly improved, was given a castor-oil draught. This operated three times, and in the last passage the

bullet was found. His progress to complete recovery after this was uninterrupted by any untoward symptom. Dr. O'Meagher ascribes the favorable termination of the case to the smallness of the missile; to the early closure of the wound; to the entire absence of attempts to find the bullet by probing, a species of surgery not only meddlesome, but criminally dangerous; to abstinence from food and drink except in small quantities; to absolute rest, and a good constitution.

CHRONIC CYSTITIS OF MANY YEARS' STANDING CURED BY THREE INJECTIONS OF A STRONG SOLUTION OF NITRATE OF SILVER (*New Orleans Medical and Surgical Journal*, May, 1875).—At the clinic of the Charity Hospital, Prof. Richardson lectured upon a case of chronic cystitis in a man æt. 44. He commented particularly upon the great caution advised by most authors in the use of even a very weak solution of nitrate of silver as an injection. He stated that for several years past he had invariably employed in such cases solutions varying in strength from ten to sixty grains to the ounce of water, and with almost uniformly successful results. He argued that an injection of less than ten grains is utterly worthless, in consequence of its immediate decomposition by the small quantity of urine which it is sure to meet with as soon as it enters the bladder.

He then proceeded to wash out the patient's bladder with tepid water, and followed the discharge of the latter immediately with two ounces of a solution of nitrate of silver, twenty grains to the ounce. This latter was allowed to remain in the organ about a minute, and then to flow out through the catheter, the salt having in the mean time become almost entirely precipitated in the form of chloride of silver. The injection was not succeeded by another of tepid water for washing out the remains of the nitrate of silver. This is not necessary except where much stronger solutions are employed. The patient complained for a few hours of a severe burning at the neck of the bladder; but the next morning he expressed himself as feeling remarkably well. In fifty-eight hours there was a marked improvement in the character of the urine, and great amelioration of the dysuria, which had formerly been very annoying.

After the lapse of eight days another injection was made, containing thirty grains of the salt to the ounce of water. This was followed by a corresponding improvement. Again, in eight more days, the same was repeated, after which every particle of pus and mucus disappeared from the urine, together with all other symptoms of inflammation. Owing to the permanently contracted state of the bladder, the patient is unable to hold his water longer than three or four hours; but even this may be improved by daily repeated efforts, with a view to put the bladder slightly upon the stretch, and thus gradually increase its capacity.

SYPHILITIC SARCOCELE (*The Medical Press and Circular*, June 30, 1875).—Dr. Thiry remarks that a peculiarity worth noting in cases of slow evolution of syphilis is that it is the glandular organs, and especially the testes, that are affected. Syphilis concentrates itself for a long time in the testicle, and only attacks the other tissues later on. In this case the syphilis is not less grave; the more time it has required for its development the longer it will require to disappear. A long and persistent treatment will be required. He prescribed four pills of five milligrammes of corrosive sublimate a day, one to be taken in the morning, one at noon, one at 4 P.M., and one in the evening in a glass of decoction of sarsaparilla. Mercurial friction of a quarter of an hour to be made on the internal aspect of the legs, thighs, and arms. After each two frictions a bath of starch to be taken. The diet strictly confined

to roast meat and vegetables, and the patient to abstain from acids.

As a general rule, we have found large doses of the iodide of potassium to effect such a rapid cure in similar cases that we are a little surprised to find that Dr. Thiry has not made any use of this medicine in this case. Doses of one gramme, or fifteen grains, thrice or four times daily, in plenty of water, act marvellously well.

THE TREATMENT OF STRANGULATED HERNIA BY THE USE OF A DILATOR (*The Medical and Surgical Reporter*, July 10, 1875).—Dr. H. R. Allen, of San Francisco, describes an instrument devised by himself for dilating or rupturing the stricture which exists in cases of strangulated hernia. The amount of laceration produced by it is very slight, and is entirely under the control of the operator, but is sufficient to relieve the strangulation of blood-vessels and permit the congestion and tumefaction to disappear, and usually allows the return of the hernia in a few hours. At the same time it has proved an advantage by causing sufficient inflammation of the ring to produce adhesion, if a firm truss is at once employed, and quiet enjoined. The distention employed carries the parts in the stricture upward, and away from the hernia, and not a particle of pressure is exerted upon the constricted tissues: hence no wounding of those parts occurs.

One great advantage is, that it is admissible at any stage when the parts are not fatally injured, and, if employed immediately when taxis fails, all danger of inflammation or gangrene is avoided.

ELECTRO-PUNCTURE IN HYDROCELE.—Dr. Ehrhardt (*Boston Medical and Surgical Journal*, July 15, 1875) has tried radical treatment of hydrocele by electro-puncture four times with permanent success, using the interrupted current of the small apparatus of Gaiff. In three cases the hydrocele had existed only a short time, and tapping had not been resorted to; the fluid, although in considerable quantity, was absorbed in three to five days without any reaction. In the fourth case the fluid was absorbed by the end of three weeks. In this case the patient was fifty-two years old, with a hydrocele on the right side, of eight years' standing; he had had it tapped often. After tapping, the fluid had returned at the end of three weeks. The operation was performed in the following manner: Two large, sharp-pointed, inverted needles, connected with the pole of the apparatus, were thrust into the swelling at a distance of six centimetres from each other, and to a depth of three centimetres, so that the needle projected into the fluid. The tunica vaginalis was very tough and thickened, so that there was some difficulty in inserting the needles. There was but little pain, the application lasting about five minutes. The needle of the negative pole on being withdrawn appeared blackened and oxidized. The patient, as a matter of precaution, remained two days in bed. Four months later there was still no return of the fluid. The author thinks that this method could not probably be effective where there was considerable alteration in the tunica vaginalis.

MISCELLANY.

LONGEVITY IN ENGLAND.—The mortality returns for England for the year 1872 show that 195 men and 433 women died at 95 years old and upwards. Of this number 24 men reached or exceeded 100 years, one attaining 111 years. Of the women, 51 reached or exceeded 100 years, two having died at the age of 107. Of the whole number remaining, men and women, two

died at 101, two at 102, one at 103, two at 104, and one at 105.—*New York Medical Record*.

SOLUBILITY OF GLASS.—Glass vessels in which various liquids, and even pure water, are boiled, give up by degrees a small quantity of their substance,—silica, potash, soda, and lime. The analysis is the more misleading the longer the boiling is continued. This, at least, was what resulted from German glasses sold at Nancy in 1874. The fact may be shown by boiling in a flask pure water, mixed with a tincture of red cabbage, or syrup of violets slightly reddened by an acid. After a few minutes the liquid turns green. French glasses, with a base of soda, are not sensibly attacked, and therefore do not suffer this inconvenience.—*Pharmaceutical Gazette*.

FROM the annual report of the receipts and expenditures of the Royal College of Surgeons of England, which was submitted to the Council on the 8th ult., it appears that the former amounted to £16,057 12s. 4d., and the latter to £14,052 8s. 2d., showing the good balance of £2005 4s. 2d. The income is derived principally from fees paid on examinations for the diplomas of fellow and member and of dental and obstetric licentiate, which produced £11,156 7s.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

PHILADELPHIA, PA., August 3, 1875.

DEAR SIR,—In my communication on "Nitrite of Amyl in Hysterical Convulsions," etc., published in your journal of July 31, *Case I.* reads, "a series of *subintense* convulsions," which is a typographical error; it should read, "a series of *subintrans* convulsions." The word *subintrans*, used by Trousseau in his clinical lecture on "Convulsions," means that as the patient passes out of a convulsion he immediately passes into another convulsion, or that before the convulsion subsides another comes on.

Yours truly,

RUFUS K. HINTON, M.D.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM AUGUST 3, 1875, TO AUGUST 9, 1875, INCLUSIVE.

MIDDLETON, J. V. D., ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 83, Military Division of the Missouri, Aug. 2, 1875.

HUNTINGTON, D. L., ASSISTANT-SURGEON.—Relieved from duty in Department of California, and to report in person to the Surgeon-General. S. O. 158, A. G. O., Aug. 5, 1875.

BROWN, HARVEY E., ASSISTANT-SURGEON.—Assigned to duty at Fort Barrancas, Florida. S. O. 141, Department of the Gulf, July 31, 1875.

KIMBALL, J. P., ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 147, Department of Dakota, Aug. 3, 1875.

STYER, CHARLES, ASSISTANT-SURGEON.—Assigned to duty at Fort Macon, N.C. S. O. 109, Department of the South, Aug. 3, 1875.

MAUS, L. M., ASSISTANT-SURGEON.—Assigned to duty at Nashville, Tennessee. S. O. 111, Department of the South, Aug. 6, 1875.

KILBOURNE, H. S., ASSISTANT-SURGEON.—Assigned to duty at Fort Gibson, Indian Territory. S. O. 139, Department of the Missouri, Aug. 3, 1875.

BARNETT, R., ASSISTANT-SURGEON.—Assigned to duty at Couchatta, La. S. O. 145, Department of the Gulf, Aug. 5, 1875.

CRAMPTON, L. W., ASSISTANT-SURGEON.—Assigned to duty with Battalion 13th Infantry, in camp at Mississippi City, Miss. S. O. 142, Department of the Gulf, Aug. 2, 1875.

WOOD, M. W., ASSISTANT-SURGEON.—Assigned to duty at Camp Douglas, Montana Territory. S. O. 87, Department of the Platte, Aug. 4, 1875.

LORD, G. E., ASSISTANT-SURGEON.—Assigned to duty at Fort Buford, Dakota Territory. S. O. 145, Department of Dakota, July 31, 1875.

SATURDAY, AUGUST 21, 1875.

ORIGINAL COMMUNICATIONS.

PARACENTESIS THORACIS.

A Lecture before the Oxford, Pa., Medical Society,

BY JAMES TYSON, M.D.,

Professor of Pathological Anatomy and Histology in the University of Pennsylvania; one of the Physicians to the Philadelphia Hospital, etc.

PARACENTESIS of the chest is by no means a new operation, and I cannot, therefore, base the propriety of my detaining you with its consideration on any such assumption. It is not, however, so frequent an operation as it should be, and on this ground I may be justified in pointing out some of the indications for its more frequent performance, the simplicity of the operation itself, some of the instruments which have rendered the operation so easy and harmless, and, finally, one or two instances of the happy results derived from its use.

The object of the operation, as is well known, is to evacuate fluid, serous or purulent, from the chest by perforating the chest-wall, now invariably in an intercostal space, but formerly, also, by boring through a rib. It is, as stated, by no means a new operation, but was performed as far back as the era of Hippocrates, for the same objects as it is performed to-day, and with surprisingly little difference in the essentials of procedure. But, although it continued to be done from that remote era to the present, having, like transfusion, a varying popularity, we are indebted to the great French clinician Trousseau for establishing the operation on a sound basis. To his admirable work on clinical medicine I must also refer you for the details of its history, which is full of interest. Trousseau's first memoir on the subject, containing a report of three cases, was read to the Academy of Medicine in 1843. Two principles, at one time disputed, had, up to this date, been determined: first, that the fluid might be drawn rapidly from the chest without harm,—that is, all at one sitting, instead of a small quantity on successive days; and, secondly, that while it was desirable, as much as possible, to prevent the entrance of air into the chest, this was by no means absolutely necessary, as the chances of consequent injury were trifling. During this period, also, the trocar had come to be substituted for the bistoury; the trephining of the ribs had been omitted, and a variety of means had been suggested for plugging temporarily the external orifice of the canula.

I believe Trousseau has correctly assigned the reason for the unsettled position which paracentesis thoracis had attained among operations up to his own period. This cause* he states to arise from an "insufficient knowledge of the indications for operating, and not from any imperfection in the mode of performing the operation." He goes on to say, "It is impossible for any therapeutical means to be regarded with general favor, be it a medicine or sur-

gical operation, unless it be suited to a determined exigency. A remedy will remain unemployed so long as the circumstances which demand its employment are unknown. Or at most, an experimentalist tries it at a time, in a sort of hap-hazard way, and announces a successful result; others who attempt to follow in the same direction either use the remedy too timidly or too indiscriminately, thus discrediting it and causing it to fall into oblivion. Such has been the fate of paracentesis of the chest."

Up to the beginning of the nineteenth century, the only evidences of fluid in the chest were the sounds produced by *succussion*, and the bulging of the intercostal spaces, although it was said by Mursinna, a German surgeon, in 1811, that a *dull* sound of a very peculiar character was sometimes heard on percussion. The same author, besides insisting upon the phenomena of *succussion* as absolutely essential to diagnosis, also said that oedema of the inferior extremities and of the scrotum was almost invariably present.

With the discovery of auscultation and the elaboration of its results and those of percussion by Laennec and his followers, the vagueness of information as to the presence of the condition requiring paracentesis of the chest passed away. But the distrustful, uncertain attitude of this very discoverer towards the operation was largely influential in preventing it from being properly appreciated until Trousseau established it upon a firmer basis after the year 1843, although in Germany it was more popular. In England it was discouraged by such authorities as Hope, Stokes, and Watson.

Since this period, in addition to Trousseau in France, Bowditch in America, Stokes of Dublin, and Budd of London have done most to popularize the operation. Conspicuous among these is Dr. Bowditch, of Boston, who up to 1868 had performed the operation one hundred and fifty times on seventy-five persons: *eight* times in six weeks on the same patient, a physician, and *nine* times in eight and a half months on a lady,—beginning when she was pregnant four and a half months, when dyspnoea was threatening death,—and who was delivered at full term, and completely recovered; Dr. Bowditch has consequently come to be regarded as the most eminent American authority on the subject.

But, notwithstanding these results and the comparative frequency of the operation, paracentesis is still too infrequently performed, and I am confident that, if the lives of many are not sacrificed, patients are, at least, unnecessarily made to suffer weeks and even months longer than they should through omission of the operation. Such an omission at the present day can be attributable only to one of *two* causes: 1, an unnecessary timidity, or apprehension that the operation is a serious one; and, 2, a feeling of indifference, based upon an idea that a patient is rarely if ever killed by a thoracic effusion, and that in the course of time the effusion will disappear through the agency of diuretics, or even without any treatment directed especially to the effusion.

That the timidity referred to is not altogether

* Sydenham Society's Translation, vol. iii. p. 208.

without foundation might be inferred from the fact that Laennec himself once transfixes the diaphragm and pierced the liver, and that through the *fifth* intercostal space; while Dr. Watson, of London, once witnessed an operation in which the trocar was pushed through the diaphragm into the spleen, which was unusually large, the patient dying of peritonitis a day or two afterwards. At the same time, I think I can show you that such accidents as these can be avoided, especially with this knowledge that they have occurred previously.

With regard to the second cause of infrequency of the operation, it is erroneous and inexcusable from either point of view; for, in the first place, death from the effects of pleuritic effusion is by no means a rare occurrence,—some striking examples are given by Trousseau,—and, in the second, apart from the risks of tuberculosis and empyema, which are well known to exist during a long-continued pleuritic effusion, we have no right to keep invalid and unemployed for many months a patient whose time and labor may be a means of support to others, to say nothing of his personal discomfort.

And this suggests the circumstances under which the operation may be called for. What are they? These are the chief. First, where in consequence of extreme accumulation of fluid in the chest, whether rapid or slow, there is danger of death from syncope, heart-clot, or asphyxia; the first two from impediments to the circulation, the second from encroachment upon the breathing-space and resulting deficient aeration. These are indicated by extreme weakness, disposition to fainting, great dyspnoea, often amounting to orthopnoea, lividity of the face, and other symptoms of embarrassed breathing, as well as displacement of the heart and the physical signs of effusion. Second, in those extreme or more moderate accumulations of *latent* pleurisy in which, although the above dangers may not be markedly present, the recovery of the patient is likely to be materially retarded by their presence. Among the most common evils which are apt to ensue upon the long-continued presence of a serous chest-effusion is an *empyema*. Almost never is a purulent product the primary result of a pleurisy, except in certain conditions of the system induced by the puerperal state, and the eruptive fevers, especially smallpox and scarlatina, although in children the serous effusion is apt to become purulent at a much earlier date; and in all cases, the longer an effusion lies in a chest the more likely is it to become an *empyema* with its destructive hectic. Such a grave substitution as this we can best prevent by paracentesis, while the presence of an empyema, whether primary or secondary, gives us the third indication for operation. Not that the otherwise invariably fatal termination of an empyema is averted, for the opposite result of the case I show you to-day is an exceptional one; but it at least retards the fatal end, saves the lives of some, and in children a favorable issue is not uncommon. Fourth, with the light modern pathology has shed upon the causation of tuberculosis, long-continued pleuritic effusion being one of the best-established causes, we have in this fact another, which should prompt to a

tapping of the chest when serous or purulent fluid is present. Fifth, in the pleuritic effusions which so constantly ensue in the course of valvular disease of the heart and Bright's disease of the kidney, paracentesis may be performed for the relief of dyspnoeal discomfort, and to relieve the blood-vessels from that pressure which impedes absorption and prevents the removal of dropsies in other parts of the body.

Finally, paracentesis may even be performed for the great relief of the patient where pneumothorax co-exists with effusion, where the pleura has been perforated by ulceration in phthisis, or even, according to Trousseau, in cancer of the pleura. These are, of course, the most unfavorable cases, and only temporary palliation may be expected from them.

We have next to consider the *site* and *method* of performing the operation. Apart from the fact that circumstances must sometimes modify the selection of the point of puncture, there has been by no means a unanimity of opinion. Other things being equal, sufficient distance from a vital organ, a point which will secure the best drainage, and thinness of the chest-walls are the guides to success.

Trousseau selects the sixth or seventh interspace, nearly four or five centimetres (one and three-fifths to two inches) external to the outer edge of the pectoralis major muscle.

Dr. Bowditch chooses an interspace about an inch and a half above the lowest level at which the respiratory murmur can be heard on the opposite or healthy side. I have myself always, as nearly as possible, taken a point named by Dr. Aitken, between the seventh and eighth, eighth and ninth, or ninth and tenth ribs,—most frequently, perhaps, between the eighth and ninth,—in a line let fall from the inferior angle of the scapula, as giving all the advantages of dependence, thinness of chest-walls, and remoteness from liver or spleen. In all instances, however, the vicinity should be explored by auscultation and percussion, with a view to detecting deviations in the situation and size of these organs. With such precautions I think it almost impossible to make the mistakes already referred to as having been made by Laennec and others.

The patient, if not too feeble, may sit astride a chair, steadying himself by seizing the back, or, if feeble, he may be brought to the edge of the bed, resting in the arms of a friend.

Trousseau insists very strongly upon the skin, at the point to be perforated, being first incised by a lancet or bistoury; but I have never done it, seeing no necessity or even advantage in such a course. Others, again, seek to benumb the sensibility by holding a piece of ice to the part; but I do not think sensibility is practically diminished by such a course. Complete local anæsthesia may, of course, be obtained by throwing the rapidly-evaporating rhigoline against the part by an atomizer; but the advantage derived is more than offset by the alarm which must grow out of so much parade of apparatus and time occupied in preliminaries. I therefore at once perforate, without attempting to induce local anæsthesia. Much of the apprehension which

formerly existed with regard to the access of air to the pleura, and a resulting conversion of a simple serosity into an empyema, is unfounded, so that it is really not necessary to have an air-tight apparatus; at any rate, the operation should not be deferred for the want of one, but an ordinary moderate-sized trocar, such as I show you, and which I have several times used, will answer very well. The point selected, the end of the index-finger is pushed well into the interspace, and the trocar, inclined upwards so as to be turned away from the liver or spleen, is thrust in between the finger and the upper border of the inferior rib. The lower border of the upper rib is avoided, so as to escape the intercostal artery; although there is little danger of wounding it,—Trousseau says it has never happened,—because the vessel is contained in a groove on the inner and under surface of the rib. The operator perceives in a moment when he is within the chest-cavity, in consequence of the diminished resistance, just as we know we are within the bladder in introducing a catheter. The trocar is then withdrawn, and most generally the fluid begins promptly to flow through the canula. Two causes may, however, interfere with immediate success. The most frequent of these occurs where a false membrane of so recent formation exists that it is but slightly adherent to the chest-wall, and consequently is pushed off when the trocar has passed through the muscles. This is more likely to occur when the trocar is timidly or slowly passed than if it is quickly plunged. Should this occur, the membrane may be generally broken or torn by passing a probe through the canula and moving it about. Sometimes, it is said, it may be necessary to withdraw the canula and perforate in another spot; but I have never met the accident, even in its less serious degree.

Another cause of deficient flow is occasionally found in a circumscribed or sacculated pleurisy, where, in consequence of partitions of false membrane, the pleural cavity is divided into more or less perfect compartments, which usually, however, communicate with one another. These may drain slowly, and finally the flow may cease altogether before the chest-cavity is empty. It is recommended to attempt to break up these partitions by suitable blunt-pointed instruments or probes.

Another cause of delayed flow mentioned by Trousseau is an indisposition on the part of the patient to use the corresponding lung in breathing, either from habit or a nervous condition. This effect is combated by asking the patient to cough or to strain as at stool; but the former request soon becomes unnecessary, as an irresistible disposition to cough very soon presents itself, and often becomes very annoying, continuing long after the operation is completed. It is, no doubt, due to the irritating influence of the inspired air, to which the compressed lung has long been unaccustomed. Extreme pain is also sometimes experienced from the same cause. Both may be controlled by the use of an opiate immediately after the operation,—a hypodermic injection of morphia affording the most convenient and reliable mode of exhibition.

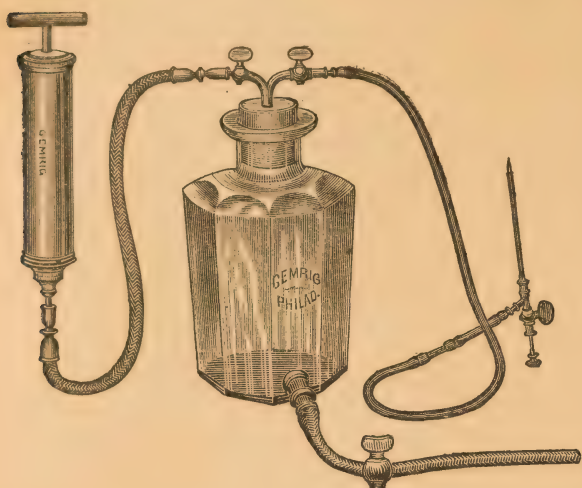
But although an ordinary trocar and canula are sufficient for the operation of paracentesis, yet, in view of the greater facilities afforded by special instruments for thoroughly emptying the chest, as well as the fact that there is some risk of converting a serosity into a purulent fluid by the access of air, it is well to use some form of the so-called aspirators now used for this purpose, and for emptying other cavities where it is desirable to prevent the access of air or to avoid extensive incision. Trousseau always operated with a trocar and canula, to which a piece of gold-beater's skin or similar substance was attached, so that when wet it fell over the opening of the canula, and, acting like a valve, allowed the fluid to flow out, but prevented the air from entering.

The best of the early modern instruments devised for this purpose was the so-called Bowditch's apparatus, originally made for him by Codman & Shortleff, of Boston. It consists of a moderate-sized trocar, with a canula capable of being attached by an intermediate tube to a syringe provided with a stop-cock so arranged that when open it permits the suction of fluid from the chest, while a second opening communicating with the exterior is closed. When the syringe is filled, the opening communicating with the chest is closed, and on pushing in the piston the fluid is forced out through a second tube, the end of which may be submerged, if desired, in a vessel of water provided for this purpose. Then this opening is closed, and the syringe again filled from the chest, and emptied as is shown. The apparatus is a good one of its kind, and, except that the barrel of the syringe is metallic and therefore not transparent, it appears to me as good as the more recent apparatus of Dieulafoy next shown, and now well known as the aspirator. It was devised, as is well known, for draining fluids without access of air, by fine perforated canulæ, from any deep-seated situation, as a renal abscess or the bladder. The principle is identical with that of Bowditch's apparatus, but the fine canulæ are commonly used, and the barrel of the syringe, being of glass, permits the fluid to be examined through it.

It is a matter of extreme difficulty, however, to get a glass cylinder which is perfect, and much care must be exercised in selecting an instrument. Further, both of the above instruments are very apt to get out of order, and it is almost indispensable, in order to be sure of their successful operation, to have them overhauled by the instrument-maker immediately before using. Finally, the muscular effort required in their use is considerable, and if the quantity of fluid to be evacuated is large, considerable fatigue ensues.

Neither of these objections can be made to the next instrument I show you,—the aspirator of Potain, and made by Gemrig of this city,—which is by far the best yet introduced. The perforating apparatus is similar, but the exhausting apparatus consists of a bottle,—any wine- or beer-bottle will answer,—which receives a rubber stopper communicating on the one side with the fluid-cavity, and on the other with an air-pump syringe, from either of which it is capable of being cut off by a stop-cock.

When the bottle is exhausted by the air-pump, the proper attachments are made, and the chest perforated; the communication with the chest is then opened, and the fluid flows rapidly into the bottle, even through the needle or exploring canula,—so



rapidly, indeed, that I have never had occasion to substitute a larger canula for this exploring one. When the vacuum seems nearly filled, the air-pump is again brought into requisition, and when full the bottle is emptied, the communication with the chest being cut off by the proper stop-cock; after which the attachment is again made, the bottle emptied of air, and the fluid allowed to run until the receiver is full. As a receiver of large capacity may thus be used, it is evident that the effort required to empty a chest of many ounces is comparatively trifling.

A very convenient apparatus for simple exploratory purposes is the ordinary glass barrelled hypodermic syringe, by which a small quantity of fluid may be drawn from the chest and examined without danger of entrance of air.

(To be continued.)

RUPTURE OF EXTERNAL ILIAC ARTERY— DEATH ON TWELFTH DAY FROM INTERNAL HEMORRHAGE.

Read before the Pathological Society of Philadelphia, June 24, 1875,

BY JOHN ASHHURST, JR., M.D.,

Surgeon to the Episcopal Hospital, etc.

A. R., an engineer, 39 years of age, and a native of this country, applied for admission to the Episcopal Hospital on June 15, 1875, saying that one week before he had, in trying to board a railway-train, slipped and fallen backwards, striking a rail of the adjoining track, and receiving a severe blow in the region of the lumbar spine. But slight inconvenience from the injury was experienced at the time, but the next morning the patient felt stiff, and had a good deal of pain in his back,—these symptoms becoming more, rather than less, marked

during the following days, though even when admitted to the hospital he walked without difficulty, and considered himself, and was considered, to be suffering merely from a contusion or sprain of the lumbar muscles.

This was on Tuesday. On the following day the patient was in much the same condition, and gave no evidence of having received any serious injury. His bowels were moved by a mild laxative.

On Thursday, June 17, I found the patient in a cold sweat, and then learned that a similar "sinking spell" had occurred on the preceding day, but had passed off in a short time, and had been, apparently, of a trivial character. The patient now complained of pain in the left side as well as in the back, but there was no great tenderness manifested on palpation, and nothing was discovered to throw any further light on the case. The left common femoral artery was observed to be pulsating with great force, but the pulsation was not expansile in character, and a slight fulness which existed below Poupart's ligament was evidently due to an enlargement of several lymphatic glands. There was no abnormal pulsation nor tumor in the course of the iliac artery.

On Friday, June 18, the patient was almost in a state of collapse, bathed in a profuse cold sweat, with rapid respiration, and with a pulse running at the rate of 120 or more beats in the minute; he had more pain, still referred to the back and left flank (rather in the hypochondriac than in the iliac region), and vomited a little after taking food, though his diet was limited to milk, mixed with lime-water, and a moderate amount of stimulus. There was no tympanites and no general abdominal tenderness, and the tongue was, as it had been throughout, moist and clean. The pulsation in the common femoral artery was now rather feeble; but there was, on the other hand, a marked pulsation in the epigastric region, perceptible both to sight and to touch; auscultation, moreover, revealed a bruit, not, however, of a very decided character, and not propagated for any great distance along the course of the aorta. There was no bruit in the iliac region. Careful palpation failed to discover a tumor in any part of the abdomen, though there was a slight fulness in the left flank, such as is sometimes observed at an early stage of psoas abscess.

As elucidated by the results of the post-mortem examination, the signification of the various symptoms now seems plain enough; but at the time I confess that I felt some hesitation in making up my mind as to the precise nature of the injury. Three conditions presented themselves to my consideration as possibly present,—viz., internal strangulation, latent peritonitis, and internal hemorrhage. The supposition that strangulation existed was negated by the state of the patient's tongue, and by the absence of constipation; the same circumstances, together with the total absence of febrile excitement, contradicted the notion of peritonitis; and by a process of exclusion, therefore, I was led to think that the symptoms observed were due to internal bleeding. The source of the hemorrhage was next to be considered. The constant pain in the left

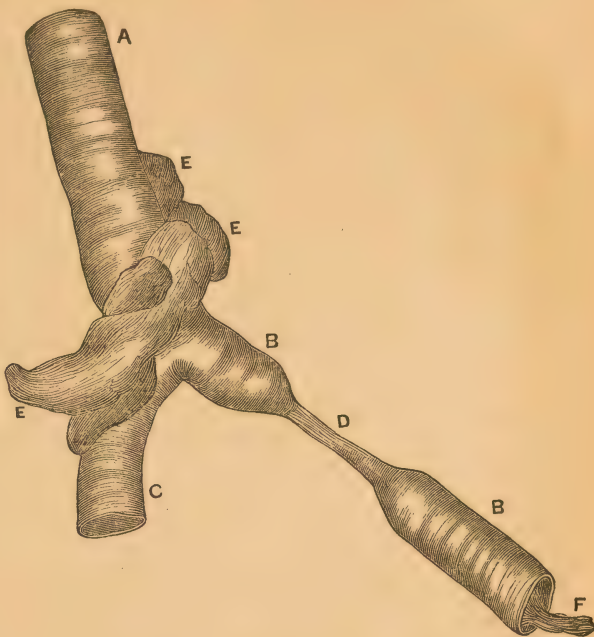
flank suggested the existence of rupture of either the spleen or the left kidney; but a careful examination of the patient's urine, made by my very competent house-surgeon, Dr. Rudderow, failed to detect the presence of either blood or albumen, and I could hardly believe that a splenic rupture, of sufficient gravity to prove fatal, could have existed more than a week without giving evidence of its presence. I had, indeed, seen lacerations of the spleen which produced no symptoms during life, and which were only discovered after the death of the patient from other causes; but a rupture so extensive as to endanger life by hemorrhage would certainly have proved fatal at an earlier period. Here, again, then, by a process of exclusion, I was led to believe that the patient was bleeding from a large artery, which had undergone partial rupture at the time of the original injury, and that the efforts of nature to repair the lesion, though temporarily successful, had ultimately allowed the occurrence of profuse hemorrhage. Thus far my opinion was proved correct by the results of the autopsy, but I was misled—and, I think, naturally misled—by the absence of pulsation or bruit in the iliac region, and by the presence of both in the epigastrium, to infer that the injured vessel was either the aorta itself, or one of its large abdominal branches.

On Saturday, June 19, I found the patient almost moribund. There was now a good deal of tympanites, but no general abdominal tenderness; the patient's tongue was still clean and moist; vomiting had ceased, and the administration of a simple enema had produced three copious fecal evacuations. That which the day before was only a fullness in the left flank, now appeared to form an elongated tumor; but the tension of the abdominal muscles on this side was so great that in the patient's prostrated condition no accurate examination was possible. The left-sided pain and tenderness were still increased, and to my former diagnosis of internal hemorrhage I now added that of localized peritonitis. The patient died a few hours after my last visit.

A post-mortem examination was made the next day by Dr. T. H. Andrews, one of the coroner's physicians. On laying open the abdomen, recent peritoneal adhesions were found upon the left side, and beneath the peritoneum was found an enormous clot filling the left vertebral gutter from the pelvis to the diaphragm, and above turning inwards and compressing the aorta. The clot having been removed, the source of bleeding was found in a rupture of the left external iliac artery, about half an inch below the bifurcation of the common trunk; both ends of the torn vessel were retracted, though held together by a portion of the external coat of the artery, and the distal end was partially occupied by a well-formed coagulum. The abdominal viscera, as far as examined, presented a normal appearance.

The symptoms presented in this case were now readily explained. An incomplete rupture of the external iliac artery no doubt occurred at the time of the patient's injury, but either the external coat of the vessel remained intact, or, if it was involved

in the rupture, a clot was formed, and the bleeding was temporarily arrested. Hemorrhage began or recurred on the eighth or ninth day, and on account of the anatomical relations of the vessel, bound



A, common iliac artery; B, external do.; C, internal do.; D, position of rupture; E, clot overlying common trunk; F, clot protruding from distal end of external iliac artery.

down as it was by the iliac fascia, the blood found its way upwards, dissecting up the peritoneum, and finally impinging upon the aorta, thus by pressure producing the pulsation and bruit which misled me as to the situation of the lesion. The femoral pulsation noted on June 17 showed that at that time blood was passing freely through the injured vessel, and was no doubt the forcible pulsation often observed in the arteries of a part from which secondary hemorrhage has occurred or is about to occur. As the bleeding went on, the clot formed about the injured artery exercised a certain amount of compression, and the violence of the pulsation was diminished. With the consequent enlargement of the coagulum, the peritoneum was more and more separated from its attachments, giving rise to steadily increasing pain, and ultimately leading to localized peritoneal inflammation. The arterial rupture was too extensive to permit the formation of a traumatic aneurism, and when secondary hemorrhage occurred the patient literally bled to death.

I have said nothing as to the treatment adopted in the above case, for, in the absence of any certain knowledge as to the nature of the injury, it was, of necessity, purely empirical, and directed to the relief of symptoms; and though it may have prolonged life for a few hours, it of course exercised no influence for either good or evil, as regards the ultimate termination of the case. Had it been possible during life to determine the exact source of bleeding, the propriety of attempting the application of ligatures to the injured vessel would have had to be considered.

NOTES OF HOSPITAL PRACTICE.

ST. BARTHOLOMEW'S HOSPITAL, LONDON.

SERVICE OF MR. CALLENDER.

Reported by JOHN B. ROBERTS, M.D.

OPERATION FOR THE RELIEF OF STRANGULATED FEMORAL HERNIA.

AN elderly woman was admitted, who had had a hernia for many years, and who said that it had always been possible to push the bowel back. On closer examination, however, it was evident that she had never been able to replace it entirely, and that a portion of the protruded abdominal contents always remained external to the opening in the parietes, constituting, therefore, an incompletely reducible hernia. Three days before her admission the tumor became larger, and thus attracted the patient's attention; it could not be pushed back as usual, and soon became somewhat painful, though not especially so.

On examination, quite a large tumor was seen at the upper part of the thigh and in the right groin, extending from the external femoral ring upwards and outwards over Poupart's ligament, but its position was such as to render the diagnosis between femoral and inguinal hernia easy, since it did not extend towards the labium. The superior spinous process of the ilium, which was readily found, although the patient was fat, gave the direction of Poupart's ligament, and thus afforded a guide to the character of the hernia; the pushing upwards of the tumor being probably due to the mass of veins emptying into the saphena and femoral veins at this point. There was little or no resonance on percussion, the tumor did not have an impulse when the woman coughed, and she had neither vomited nor even felt nauseated; but the tumor felt tender, her bowels had not been opened for several days, and her tongue was coated quite heavily. Taxis had been attempted by a surgeon outside, who, being unsuccessful, had advised her removal to the hospital.

Although the symptoms were not very urgent, an operation was indicated, because it was evident that the strangulation, if not relieved, would lead to mortification, and therefore, as the life of the patient was jeopardized, it was deemed proper to use the knife. The woman was etherized, and a last attempt at taxis made under the relaxing influence of the anæsthetic; but, this proving unsuccessful, the operation was begun. A vertical incision, two and a half inches long, was made over the most prominent portion of the tumor, cutting from without inward, and not by transfixing, as is sometimes done. When the sac was reached, an endeavor was made to replace the mass, sac included, into the cavity of the abdomen; but the many adhesions rendered this impossible, and therefore the bands of fibrous tissue were torn by the finger, or, when they were very firm, divided with the knife.

As it was impossible to force the mass back through the opening in the abdominal parietes, the sac formed of the parietal peritoneum was slit open on a director, whereupon a small amount of serum escaped. It then became evident that the hernia was an epiplocele, for there could not be found a single coil of intestine protruding; whence the negative character of the symptoms presented by the patient when first examined. The constriction exerted by Gimbernat's ligament was relieved by introducing a narrow knife into the wound and cutting the edge of the ligament, after which procedure the protruded omentum was replaced without difficulty. This is a very delicate step in the operation, on account of the occasional abnormal distribution of

the arteries, which must, therefore, be remembered in all cases.

A tent was introduced into the wound, to facilitate drainage, the carbolized oil dressing was applied, without any sutures being used, and the administration of an opiate was ordered.

[One week subsequent to the operation the patient was doing well, and everything seemed to point towards a favorable issue of the case.]

ST. THOMAS'S HOSPITAL.

SERVICE OF MR. SYDNEY JONES.

SUBCUTANEOUS DIVISION OF THE NECK OF THE FEMUR IN A CASE OF BONY ANCHYLOSIS OF THE HIP-JOINT.

THIS man presents a remarkable deformity, resulting from an attack of what was called rheumatic fever, though more likely pyæmia, from which he suffered about six years ago. When he was admitted to the wards there was anchylosis of both hips and also of both knees, so that he could only take exercise by using two crutches. The anchylosis of the knee-joints has been overcome by breaking up the adhesions by powerful passive motion, but it was found impossible to rupture the osseous union between the head of the femur and the ilium on either side; so that it has been determined to attempt, on the right side, the formation of a false joint by sawing through the neck of the thigh-bone. The femurs are abducted and rotated outwards, so that when the patient stands his feet are widely separated, and he assumes a semi-stooping posture. This terrible deformity is a warning to the surgeon to take the precaution to keep the limbs in a proper position in every case where there is danger of anchylosis occurring.

The operation of division of the neck of the femur for treating bony anchylosis of the hip was first done here by Mr. Adams, and, as in the present instance there is not the least movement possible, it seems a proper case for the employment of this operative interference. The operation will probably be an easy one, since there has most likely been no destruction of the head or neck of the femur, and the anatomical relation of the parts has, therefore, been preserved: it may, however, be necessary to divide also the tensor vaginae and rectus femoris muscles, which during the long period may have assumed a condition of spastic contraction.

The outline of the femur is first sketched on the skin in ink, and then a small puncture is made, and a tenotomy-knife introduced half an inch above and a little in front of the great trochanter, thus clearing the anterior surface of the neck. The soft tissues are divided thoroughly with the knife, which, as it is withdrawn, is made to enlarge slightly the cutaneous orifice, in order to allow free play for the saw, and thus prevent the occurrence of a ragged wound externally. The next step is to introduce along the track of the knife a narrow saw, which is passed flatwise, and then turned with its cutting edge against the bone with great care, lest the instrument snap and a fragment be left in the wound. The saw is now in position, and its extremity felt in the tissues by the left hand of the surgeon placed upon the upper part of the thigh; it is carefully moved back and forth until the neck of the femur is sawn entirely through, when it is withdrawn, and the thigh forcibly twisted into a much better position. As the bone was being sawn, the end of the instrument was felt to impinge against some hard substance, which was most probably the lesser trochanter.

The flow of blood, though quite considerable, is not at all abundant; but a pad shall be placed over the femoral artery just below Poupart's ligament, and con-

fined by adhesive strips, in order to cut off the supply to the smaller vessels that have been wounded. After a piece of oiled lint has been placed upon the wound, the entire limb is surrounded by a bandage.

The ankylosis having existed for six years, the muscles have accommodated themselves to the deformity, and will, therefore, tend to draw the femur into its old position: hence it is necessary to apply a splint along the outside of the leg, from the ankle upwards, to retain the limb in its present improved position. The splint is composed of two sections,—one long piece extending from the foot to a point just below the hip, and a second from above the joint along the trunk; these sections are connected by a curved rod of iron, for the object of the splint is, since we are aiming at the production of the false joint, not to keep the sawn ends immovable, as in a fracture, but to prevent the turning outwards of the limb by those muscles that have an origin from the pelvis.

The operation thus performed is not at all difficult, and seems to promise a certain amount of improvement of the deformity, which for six years has rendered the patient a helpless cripple.

TRANSLATIONS.

INFLUENCE OF THE NERVOUS SYSTEM UPON THE PHENOMENA OF PREGNANCY AND PARTURITION (Prof. Goltz and Dr. A. Freusberg: *Archiv für Phys.*, ix., 1874).—"On the 17th of December, 1873, a section of the spinal cord of a bitch nine months of age was made, and on the 28th the left sciatic nerve was also divided. From May, 1874, the animal was perfectly well, with the exception of the paralysis, was intelligent, and gained in weight, although it was proved with certainty that no transmission of nervous force took place along the cord. About the end of May the bitch became pregnant, and on the 10th of August gave birth to a strong living pup, which she cleaned by licking and then ate the placenta. A second and a third pup, both of which were dead, were afterwards taken from her, and by her treated in the same way as the first, which was born alive. During labor rhythmical flexion and extension of the hind legs were observed, and these evidently occurred in connection with labor-pains. By the touch contraction of the inner muscular tissues of the pelvis could be noted, but the vagina itself remained uncontracted. After delivery the bitch refused food, and died on the 12th of the month from peritonitis, consequent upon a perforation of the vagina. The body was examined after death, and the cut ends of the cord found to be one centimetre apart, the lower isolated portion of the cord being of normal size."

Fritsch (*Fahrbücher*, 1875), remarking upon this, says that as the ovaries were intact in this case it is conceivable that the animal should go into heat. During this time she treated the dog which she had previously driven from her in a friendly manner, but this disposition would not have been seen had the ovaries been extirpated. The condition of the brain must therefore be affected by the presence or absence of the ovary, and in this case, as the spinal cord was cut in the lumbar region, if these impressions were conveyed by this route, the sympathetic fibres must have joined the cord above that region. It appears more probable that while animals are in heat characteristic matters enter the blood, and thus act upon the brain. There is nothing strange in the idea of impregnation without sensation, since women will conceive when stunned. The development of distant organs is often dependent upon the presence of the essential parts of the genital organs. Körner has asserted that the motor fibres of the uterus have their

origin from the cord about the last dorsal vertebra, and run downwards along the aorta, and these fibres would not have been injured in this experiment. But it is not probable that the entire act of parturition is dependent upon the brain, as other fibres have their origin about the third and fourth lumbar vertebrae. Moreover, in this case the external muscles took part, and this could not have been due to impulses from the brain, but must depend upon a nervous centre in the lumbar region of the spinal cord. This centre may perhaps extend over the entire cord, so that when this is cut both portions may have power to act as long as the nerve-fibres which convey impulses outward from it exist. In the case of a primipara, aged twenty-four, in whom, in the sixth or seventh month of pregnancy, the third and fourth cervical vertebrae were fractured, there was entire paralysis of sensation and motion below the seat of the injury, but still labor-pains occurred, which were not felt by her, but were powerful enough to cause the birth of a dead child. The phenomena of this case would also tend to prove the existence of an independent centre in the cord.

W. A.

DIPHTHERIA OF A VACCINATION PUSTULE FOLLOWED BY GENERAL DIPHTHERIA (Dr. Ludwig Letzerich: *Virchow's Archiv*, B. lxiii.).—The patient in this case was a child aged four months, which, until vaccination, had been perfectly healthy. On the thirteenth day after this operation was performed, an erysipelatous swelling developed itself about the wound, and spread with great rapidity over the entire body. Edema soon appeared, followed by icterus and petechial exudations, and death took place on the twelfth day of the disease, the twenty-fifth from the day on which vaccination was performed. At the post-mortem examination lesions characteristic of diphtheria were found, and the question arose whether the lymph which had been used had been the conveyer of the disease, or whether the diphtheria had been contracted at the wound, but at a later period. The fact that diphtheria in such cases makes its appearance some days after vaccination has been performed would seem to indicate that it is not inoculated with the lymph; but, to make this point more clear, experimental inoculations on animals were made. From these the following conclusions were drawn:

1. Vaccine which is infected with the organisms which are characteristic of diphtheria is not capable of causing vaccine pustules.
2. The inoculation of lymph which contains such organisms is rapidly followed by local deposits and general diphtheria.

And these experiments show especially:

1. That the lymph which was used in this case was not thus contaminated, or there would not have been a development of a vaccine pustule at the proper time.
2. That the local diphtheritic changes, followed by the disease itself, must be regarded as processes of secondary character.

W. A.

DIABETES.—A complete cure of this affection is related in the *Bahia Medical Gazette*, by means of phenic acid, two and a half grains night and morning, in a vehicle of mint-water. The patient, a teacher of music, had been struck from his saddle by a falling tree. Trommer's test had shown a very large amount of glucose or grape sugar in the urine.—*The Doctor*, Aug. 1.

PHOTOGRAPHY IN MEDICINE (*The Lancet*, August, 1875).—Dr. Ultzman asserts that an eruption of small-pox had been made evident by photography twenty-four hours before it actually came out. Nothing could be seen on the face of the patient, but the negative plate showed stains in the face which perfectly resembled the variolous exanthem.

PHILADELPHIA MEDICAL TIMES.

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MEDICAL AND SURGICAL SCIENCE.

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EDITORIAL.

A DANIEL COME TO JUDGMENT.

A CASE has recently been decided in London which is of enough general interest to make it worthy of brief recapitulation. The operation of tracheotomy was performed on a little boy who was lying at the point of death from diphtheritic croup and laryngeal obstruction. Owing to the professional duties of both the attending physician and the operator, they were unable to remain continually with the patient: so, as it was foreseen that in the course of the case there would be difficulty in keeping the artificial opening clear, the services of a physician who lived near were obtained. This gentleman, with his brother, a qualified practitioner, was in constant attendance for one hundred and thirty-two hours, during which time the tracheal tube became repeatedly blocked by secretion, and the child on several occasions narrowly escaped suffocation, and was once brought back to life by artificial respiration, the natural breathing having entirely stopped. The case terminated in complete recovery, and an account was sent in at the rate of five guineas for every twenty-four hours of attendance. This was objected to, and was at once reduced to three guineas; but payment was still refused, no pretence being made, however, that the child's parents were unable to pay the sum demanded. The matter was taken to court, and was decided in favor of the physician, who obtained judgment for the full amount.

The *Lancet* looks upon this case as one of considerable importance, as affording a decision in which

what may be called the minimum fee for constant day and night attendance by a medical practitioner may be based.

It alludes in very complimentary terms to the summing up of the judge, who spoke of the difficulties of carrying out the details of treatment in a terribly infectious disease for one hundred and thirty-two hours, seeing at the same time the peril of the patient, and hearing and sharing the anxieties of parents and friends.

He also told the jury that "in a judgment such as was before them, they must take into consideration not merely the time of the service rendered, but the importance of the service. He had calculated that for the duties performed the sum of two shillings and seven-pence per hour had been charged, and that a surgeon working night and day at this rate, in ordinary practice, would not earn more than a thousand a year; and it could hardly be expected that, for a service so purely exceptional as had here been rendered, a less than ordinary fee should be demanded."

Verily,

"Truth from his lips prevailed with double sway."

WE are glad to see, in the shape of a letter from Dr. William Pepper, a denial of the report which was published in some of the papers, to the effect that on the occasion of the accident at the Frankford Arsenal the physicians at the University Hospital had withheld their services until they had telegraphed to know whether they would be paid for them. Dr. Pepper states that they went at once to the scene of the accident, and that "the question as to payment was asked in a moment of hurried interview with the messenger, solely in regard to the means of transportation, by the senior resident surgeon of the hospital, a gentleman from Mobile, who was perfectly ignorant whether Bridesburg was five or fifty miles away." To those who are acquainted with the gentlemen in question this explanation is unnecessary; but we reprint it for the benefit of those members of the profession who may have seen the first report and not have noticed its contradiction.

ERGOT IN THE TREATMENT OF INSANITY (*The Medical Record*, June 26, 1875).—Dr. Edward C. Mann reports several cases of maniacal disease in which the free exhibition of ergot produced either a decided amelioration or a positive cure. He believes with Dr. Browne that it is eminently useful in recurrent mania, chronic mania with lucid intervals, and epileptic mania, and that its good effect is due to its power of re-establishing the equilibrium of the intra-cranial circulation which has been temporarily disturbed.

LEADING ARTICLES.

MASSAGE.

MASSAGE, or, in plain English, shampooing, has long been a recognized procedure in medical treatment, though until lately it has seldom been employed in a careful or systematic manner. The quacks, "bone-setters," "rubbers," and the like, have enjoyed nearly a monopoly of the practice until recently, when the subject has been brought once more to the notice of the profession in a series of able articles in various foreign journals.

It is the aim of the present communication to give, in a succinct form, some account of the various methods of employing massage, the diseases in which it has been found most efficacious, and the different modifications of the procedure most applicable to each class of affections. The writer is indebted for most of the facts embodied in this article to an admirable résumé of the recent literature of the subject by W. Berger.*

The various manipulations included under the term "massage" (from *μασσω*, to knead) comprise stroking or friction (*streichen*, *effleurage*); rubbing (*reiben*, *massage à friction*); kneading (*kneten*, *pétrissage*); percussion (*schlagen*, *klopfen*, *tapotement*). Any of these may be employed separately, or several in conjunction.

The first, stroking, is performed by passing the hand gently and slowly over the surface desired to be acted upon, the flattened palm pressing against the skin, and the motion being in a direction from periphery to centre,—that is, in the direction of the venous and lymphatic currents.

Rubbing is a form of massage more frequently employed than stroking: it is similar in every respect, excepting that the movements are more vigorous and are not confined to a single direction. Previous to rubbing, all hairs should be removed from the part to be operated upon, lest irritation and the formation of acute pustules should result, which, of course, would put an end to massage for the time being. Fat or oil is sometimes used with advantage in rubbing, and the fingers should be made to follow all the inequalities of the surface, being employed with an amount of force considerably greater than that used in stroking. Rubbing should be practised with both hands simultaneously; one may be moved in a horizontal or circular direction, while the other is impelled vertically. Perfect quiescence of the part operated upon is not necessary, nor even desirable.

Kneading is performed by seizing the part in the hand, raising it from the subjacent tissues, rubbing, rolling, or kneading it between the palms, or moving it to and fro on the parts beneath. These movements are to be alternated at times with brisk friction of the surface.

Under favorable circumstances, massage should be practised twice daily, with an interval of three to four hours between the manipulations. More frequent use

of the method is sometimes advisable, but is prevented by want of time. The length of time occupied by each "sitting" may vary from six to ten minutes on an average.

Massage, when used for the first time in a case, may give rise to more or less pain, which, however, ceases with the completion of the sitting. The feeling ordinarily experienced is that of general warmth, pliability, and invigoration of the part operated upon occasionally; while the skin is reddened, its temperature increased, and occasionally blue, green, or yellow discoloration is noticed. This discoloration does not in any way affect the progress of the case, and, in fact, disappears after repeated manipulations.

Among the advantages claimed for massage are these: it promotes absorption of effused material, accelerates the circulation, assuages pain, and reduces temperature.

The rationale of its effect in these directions may be explained, at least in part, as follows. Stroking and rubbing from the periphery towards the centre lead to a direct pressure upon the interstitial lymph-canals, and thus aid in carrying away the products of effusion. In addition, an increase in the rapidity of the vascular current is gained, and the rubbing excites the nerves (at least at first) in such a way as to cause contraction of the blood-vessels themselves. When the inflammatory process has gone a step farther, and stasis exists to a certain degree in the arteries, the stroking movement first arrests the flow for a moment and sends the arterial current backward, while accelerating that in the veins. Then, when this momentary pressure is removed, the vessels are filled again, the blood moved by *vis a tergo* overcomes the stasis, and the circulation becomes more active. Towards the end of the sitting a certain amount of hyperæmia of the vessels in the manipulated parts of course occurs. This, however, never amounts to actual stasis, since exit is made easy through the thoroughly emptied capillaries and veins, the muscular movements usually made by the patient after the manipulation aiding directly in promoting absorption. A more active circulation being now established in the whole vascular region, the capacity of the capillaries is increased, and absorption is also aided by diffusion. Massage also brings about absorption by its direct influence upon the lymphatics and capillaries: the swelling in the affected part goes down, the sensory nerves are freed from the tension and pressure to which they had been subjected, their irritability is abated by further manipulation, and the temperature of the locality operated upon is lowered.

In chronic inflammations, particularly in and about the joints, vigorous circular rubbing comes into play in addition to that from periphery to centre. This crushes the newly-formed blood-vessels in the hyperplastic tissues. The fluid portions of the extravasation being drained away by the pressed-out veins and lymphatics, the more solid portions deprived of nourishment proceed to retrograde metamorphosis, and are also gradually absorbed. The characteristic fungous granula-

* Schmidt's Jahrbücher, Bd. clxvi., 1875, p. 158.

tions of chronic joint-inflammation are removed in a similar manner. Thus the active circulation kept up not only by frequently-repeated manipulation but also by active muscular movements aids directly in causing absorption of effused material.

The various manipulations of massage act directly upon the nerves, causing at first increased sensibility, later diminishing this so that it may act in allaying morbidly increased irritability of the nerves.

The various manipulations connected with the procedure under consideration act directly upon the muscles. For the excitation of contractions in paretic or paralyzed muscles stroking and percussion are important means, and kneading has been proved to act powerfully in increasing the vitality of paralyzed and atrophied muscles.

The indications for massage are found principally in those conditions of disease in which hyperæmia, extravasations, exudations, hyperplasie, condensation and thickening of the tissues, or adhesions between sinews and their sheaths, exist. Especially is massage indicated when the products of inflammation are such as may enter the circulation without prejudice.

In diseases of the joints, it is particularly useful in the acute and chronic forms of synovitis, inflammations and extravasations in the neighborhood of joints and contractions, so long as these do not depend upon bony ankylosis. Among diseases of the muscles, it is particularly indicated in inflammations and rheumatic affections.

Among nervous affections, it is particularly indicated in neuralgias and paralyzes of peripheral origin; in these massage has been proved most useful.

Massage has been used in dyspepsia to give tone to the muscular walls of the stomach, and to increase its secretion. It has also been employed with success in skin-diseases, accompanied by exudation and thickening of the corium, and finally in the formation of abscesses and mastitis.

Massage offers no prospect of success when the pathologico-anatomical nature of the morbid change itself places an invincible hindrance to the attainment of a favorable result. Thus, in diseases of the joints involving the bones or cartilages, primarily or secondarily; in ostitis, osteomyelitis, or arthritis deformans; in the later stages of ankylosis with enlargement of the bones or organized connective-tissue growth; in disease of the joints with fractures, either extending into the articular cavity itself or in its immediate neighborhood, and in affections of the joints attended with supuration, it is naturally contra-indicated. Further, in advanced muscular atrophy of central origin, in neuralgias of central origin or dependent upon constitutional causes, nothing can be done by local treatment.

The general condition also may contra-indicate massage under certain circumstances; in many complicated acute and chronic diseases an improvement of the general condition must first be awaited before massage can be employed.

The indications for the use of the several manipula-

tions are different according to the method of action of the latter.

Stroking aids in the removal of lymph and inflammatory products by the vascular system. It is, therefore, useful in acute cases; for instance, in acute synovitis with recent inflammation of the soft parts, especially if these are red, swollen, hot, and sensitive. Occasionally in using stroking it may be necessary to continue the manipulation one-half to one hour, though a shorter time suffices in most cases. Under the influence of the operation the pain usually diminishes, and the swelling and heat subside. In chronic cases demanding the more violent use of other manipulations, stroking may be employed towards the end of the sitting to guard against the swelling so apt to follow a severe rubbing.

By means of rubbing, newly-formed vessels are crushed and the tissues placed in a position to react actively, the circulation aroused, and absorption aided. It is principally indicated in chronic synovitis and perisynovitis, effusion into the sheaths of the tendons, chronic infiltration of the muscles, and similar affections.

Kneading is to be employed in inflammatory swelling of the muscles, in chronic muscular rheumatism, in "ischias," where the muscles in the neighborhood of the nerve are often affected; also in fatigue of the muscles, in order to avoid the occurrence of myositis.

Percussion is used at times for the purpose of exciting nervous action, at other times with a view to allaying it. In neuralgias this form of massage may be employed with the aid of a percussion-hammer of rubber or ivory.

It is easily understood that the particular kind of massage to be used in one case or in one class of cases may be quite different from that which would be appropriate under other circumstances. Thus, in articular affections the lighter methods are to be used when the trouble is a superficial one, the more forcible methods when, as in hip-joint inflammation, the disease is deeply seated.

The soft tissues about the diseased joint in articular affections must also come in for their share of manipulation, for by this means the neighboring vessels will be influenced, partly in a direct manner as heretofore described, partly in an indirect manner through the vaso-motor nerves.

In the treatment of articular affections massage is superior as an instrument of resorption to the bandage, for the latter compresses the subcutaneous veins, causing stasis and even œdema, while massage does not allow of stasis. It was formerly believed that massage could only be used in chronic articular affections; but it is now known that the milder methods may be used to advantage even in acute cases.

Massage has been found useful in acute and chronic synovitis serosa, and in perisynovitis. In the hyperplastic forms of synovitis it is to be used in a more forcible manner, particularly when the perisynovial parts are much thickened.

In these cases the rationale is, according to Kiör, as

follows. The newly-formed connective tissue changes into cicatricial tissue; by the contraction of the latter the lumina of the newly-formed blood-vessels are closed, their walls become atrophied, the more remote vessels are more or less emptied of their contents and their elastic walls contracted. At the same time, by continued manipulation the thinner blood-vessels are crushed. Of course, manipulation so rough as to produce this effect involves a certain amount of acute inflammation and exudation, but the latter is rapidly absorbed, while the torn vessels become atrophied. It is understood that in manipulations of this kind care must be taken not to excite too much inflammation. This may be avoided by only operating upon a portion of the diseased structure at any one sitting.

In synovitis pannosa massage has proved useful, and also in chronic, and even acute, articular rheumatism. Of course, in the earlier stages of the latter, massage will do no good, but in a later stage, when the trouble really seems a local one, gentle rubbing and manipulation have frequently proved of the utmost service.

In affections of the muscular system, myositis, rheumatism, and inflammation of the sheaths of the tendons, massage is highly spoken of by various writers. In writer's cramp it has been used in connection with injections of strychnia; but the good effect in these cases was in all probability due to the latter.

In various affections of the nerves, neuralgias, and particularly ischias, where tumor or degeneration is not the cause, massage produces the happiest effect. It is in the latter class of cases that kneading and percussion are particularly useful. In certain peripheral paralyses massage has often acted very favorably, and in these cases, also, percussion is the preferable form.

In telangiectasis Metzger has used massage with good effect. The method of its employment is as follows. A finger of one hand is laid upon the efferent vein, thus causing the capillaries of the affected part to become filled with blood. These are then suddenly squeezed together with considerable force, with the effect of rupturing some of the capillary walls. The process is repeated at subsequent sittings, proceeding from the periphery towards the centre. The rupture of the capillaries thus brought about results in extravasation of blood, and subsequently in insignificant inflammation. The extravasation disappears spontaneously, but its recession may be hastened by rubbing in the direction of the lymphatic current. The inflammation is not likely to be serious if only a portion of the growth is operated upon at a time.

Metzger has used massage to prevent the formation of abscesses, and this method has also been employed in mastitis, in bony tumors, in corneal exudations, and leukoma. It has been suggested in affections of the uterus.

What the actual value of massage as a remedial agency may be it is difficult as yet to say, but in the hands of qualified persons it undoubtedly must prove a valuable adjuvant in many cases of chronic and intractable disease. It should, however, be taken entirely

out of the regions of charlatanism, and intrusted only to those educated to use it rightly. There is a certain amount of physiological and anatomical knowledge necessary for the employment of the method, but not more than can be acquired by a skilful and intelligent nurse; and it is to be hoped that in time the ability to perform massage will be one of the recognized accomplishments of a properly-educated attendant upon the sick.

CORRESPONDENCE.

NEW YORK, August 7, 1875.

THE following case of *atresia vaginæ* completes our record of Prof. Thomas's recent operations at the Woman's Hospital. The patient was a lady twenty-two years of age, who was well developed, but had never menstruated. She said that when she was fourteen she began to have pains in the back and in the lower part of the abdomen regularly once a month. This continued for about ten months, when it ceased, but was succeeded by a feeling of faintness, sometimes accompanied by headache, which still recurs pretty regularly every month. On examination of the vulva there was no appearance whatever of anything like a vagina. Before proceeding to operate, Dr. Thomas pointed out the danger of endometritis or peritonitis being occasioned by the sudden evacuation of menstrual blood which has been for a long time imprisoned in the uterus or its appendages.

The uterus and Fallopian tubes are sometimes distended so greatly by this fluid, and thereby rendered so acutely sensitive, that the admission of air may produce dangerous or even fatal septicæmia. At the same time, he spoke of the danger of delaying operative interference during the period of menstrual activity, in consequence of which lives have not infrequently been destroyed by rupture of the Fallopian tubes, and even of the uterus itself, from distention by menstrual blood. In one instance of atresia he had seen a hæmatocele the size of an infant's head result from regurgitation of blood through the tubes into the peritoneal cavity. Should these accidents not occur, the retention of the menstrual flow is likely to occasion grave nervous and cerebral symptoms.

In the operation for atresia vaginæ, Dr. Thomas now entirely discards the knife, scissors, and all other cutting instruments, except in its very first stage. He uses the scissors simply to clip out a small portion of mucous membrane at the point where the mouth of the vagina ought to be, and for the rest of the operation pursues Graily Hewitt's plan of using the finger exclusively. He has found this method infinitely less troublesome and tedious, as well as less dangerous, than the old procedure of dividing the tissues with the scalpel or scissors. An assistant holds a sound in the bladder, and the operator keeps the forefinger of his other hand in the rectum. It is simply a matter of tearing through the connective tissue which separates the bladder from the

rectum, and there is but little danger, if proper care is observed, of perforating with the finger either the bladder in front, the rectum behind, or the peritoneum above.

When Dr. Thomas was in the habit of employing the knife and scissors in this operation, he cut through into Douglas's cul-de-sac on one occasion, but no bad results followed,—which seemed to confirm the observations of Carl Braun, of Vienna, who now considers it a very trifling accident when he takes out a piece of the peritoneum in amputating the cervix and in other operations. In the course of a few minutes Dr. Thomas had worked his finger up to its whole length in the newly-made vaginal canal, but now, when this was accomplished, he was not able to detect the slightest trace of either uterus or ovaries. In this connection it may be well to state that previous to the operation she had been thoroughly examined by the rectal touch, according to the method of Simond, and this had also proved negative in its results. Still, as Dr. Thomas remarked, a vagina will be a convenient thing for the patient to have in case she should ever marry. Before she was removed from the table, a vaginal dilator, such as Sims recommends in cases of vaginismus, was inserted.

This consists simply of a glass plug three inches long, slightly conical, open at one end and closed at the other, and about an inch in diameter. It is to be retained in position by a T-bandage, and will have to be worn for a considerable period.

The New York Diet Kitchen Society have published their second annual report for the year ending March 31, 1875. The objects of the Association are now well understood and appreciated by the charitable public. They are all practical, originating in the conception that food properly prepared is, in many cases, the best medicine, acting both as curative and preventive of the worst form of disease and contagion among the poor. The first kitchen, on Second Avenue, working in the Demilt Dispensary District, has for nearly two years answered all the requirements made by the physicians of the Dispensary upon it.

In a letter to the managers, Dr. Edward Darken, house-physician to the Demilt, says, "The working of the Diet Kitchen in this district has been most satisfactory (indeed, I have been surprised at the promptness with which demands upon the kitchen have been always met by your efficient matron), and the good done has been very great. You are to be congratulated upon the fact that you and all donors of time and money towards this object have the best possible evidence that all your beneficiaries are deserving." The managers truly say that they need no greater encouragement in their work or more eloquent argument to enlist benevolence; for when to poverty sickness is added, there is seen the strongest appeal that human suffering and helplessness can make to charity. Many of the expenses incidental to starting the machinery of a new effort were not repeated in their second year, nor will the same outlay be necessary in the establishment of other kitchens, all centring about the parent kitchen,

and dependent upon it in many respects. No false economy, however, has been practised in the selection of the food-material. The very best has always been purchased, and a skilful cook employed for its proper preparation; so that it passes into the hands of the physicians an ally to their medicines that can be depended upon. The amount of food prepared and supplied varies, of course, with the season of the year and the prevalence of disease; but the calls upon the kitchen have more than doubled since the last year's report, the average daily number of patients during the winter being thirty. The managers report that with the surplus in the treasury, and the assistance of seven hundred and fifty dollars received from the Board of Apportionment, they felt able to spread their good work and establish a second kitchen. The Northwestern Dispensary District was chosen as the one representing the interests of the west side of the city, and on March 19 the new kitchen, under the charge of its Directress, Mrs. Wm. H. Wickham (wife of the Mayor), was opened at 438 West Thirty-Sixth Street.

The managers further express the hope that with each recurring annual report they will be able to announce the opening of at least one more kitchen, until there shall be no dispensary district in the city where this efficient aid to its beneficent work shall be wanting. From their present experience they believe that the total annual expense of maintaining kitchens throughout the city in accordance with the original plan of Dr. C. H. Atwater, who devised the scheme on which the Society was established, will not exceed fifteen hundred dollars for each kitchen, or for the whole city not more than twelve thousand dollars.

Owing to the bitterness of the past winter, and the increasing number of patients to be visited, it was found that the ladies of the Visiting Committee were unable to perform that work without aid, and a competent person for the purpose was employed to assist them, at a very trifling monthly expense to the Society.

A sewing society, also organized among the ladies to provide flannels and other articles of clothing for the patients of the kitchen, has provided such garments as have been needed in cases of destitute sickness. In concluding their report, the managers say, "What can more loudly appeal to benevolence, and even to selfishness, than such an institution as this? For it is largely by the aid of the filthy and insufficient food which poverty provides, and by which nature is disabled, that disease is all-powerful to hold such an undisputed course in our crowded streets and to become such a fearful scourge to our great city. And now and then an ungentle reminder for charity is sent out of the narrow streets into the broad avenues, as scarlet fever and diphtheria emerge from the places where they have been nourished into epidemics, and demand at our own doors a ransom that would have been gladly redeemed a thousand times by the 'cup of cold water,' or, in the diet expression, the bowl of beef-tea, by which their ravages might have been checked at the outset."

The Directors of the Demilt District Kitchen re-

port the number of patients during the year 466, and the various articles were dispensed in the following quantities: milk, 7606 pints; beef-tea, 3317 pints; rice, 423½ pounds (cooked); oat-meal, 305 pints (cooked); farina, 18 pounds (cooked); barley, 13½ pints (cooked); hominy, 10½ ounces (cooked); eggs, 256; milk-punch, 126 ounces; brandy, 46 ounces; soup, 48 pints.

The elegant new floating hospital of St. John's Guild made its trial trip on the 19th of July, with a number of invited guests on board. It is the largest barge ever seen in the waters of New York, and is two hundred and fifteen feet long, with forty feet breadth of beam, and ten feet depth of hold. It has three decks, of which the upper is a grand promenade-deck (covered), of almost the entire length and width of the vessel, where the patients have the full benefit of the sea-breeze, there being nothing in any part to intercept its current. The main deck contains two wards, each forty feet in length, and a spacious reception-room for those in charge of the sick. In the hold, which is admirably lighted and ventilated, is a dining-room where one thousand mothers and children can eat at the same time. There are also a convenient kitchen, store-rooms, ice-house, closets, etc., so that the whole is admirably adapted for its purposes.

The cost of the vessel was about twenty thousand dollars; more than one-half of which has already been paid. On the evening of the 20th a grand moon-light excursion was given by the St. John's Guild on the new barge, and a handsome addition is said to have been made to the floating hospital fund by the proceeds. The first regular trip of the season with the sick children on board was made on the following Tuesday, and since then trips are made on Tuesday, Thursday, and Saturday of each week. The boat starts from the foot of Twenty-Third Street, East River, at 8 o'clock A.M., and, after making a number of landings, finally leaves the foot of Thirty-Fourth Street, North River, at 9 o'clock, returning in time to make its last landing by 6 o'clock P.M.

The tickets for these excursions are given out by the members of St. John's Guild and by physicians generally at the various dispensaries and hospitals; and each mother is allowed to take all her children, whether sick or not, who are under eight years of age. Medical attendance is afforded by a number of physicians, who volunteer their services as occasion requires, Dr. William Thurman being the chief medical adviser.

As the sale of Paris green is now very general, and suicide by the swallowing of this material has become alarmingly frequent, the Board of Health has passed the following resolution:

"That the Sanitary Superintendent be and he is hereby directed to enforce Section 15 of the Sanitary Code, and to cause a printed notice of the same, and of the State law with regard to the sale of poisons, to be served upon all persons who keep this and other poisonous materials for sale."

The section referred to prohibits the sale of Paris

green except under the regulations enforced against all druggists as to the sale of prussic acid, arsenic, and other poisons, and its enforcement will prevent its being sold carelessly in paint-shops, etc., in the future.

The American Otological Society and the American Ophthalmological Society both held their annual meetings at Newport in the latter part of July, and the members thus had an opportunity of enjoying the pleasures of that charming seaside resort, as well as of contributing to the advancement of their respective sciences. Among those present were Drs. Strawbridge, Barker, and William Thomson, of Philadelphia; Blake, Dix, and J. Orne Green, of Boston; and Agnew, Knapp, Noyes, Matthewson, Prout, Thomas R. Pooley, O. D. Pomeroy, Roosa, Sexton, and A. H. Buck, of New York and Brooklyn.

Among the more important papers read before the Otological Society were, "Intra-tympanic Pressure," by Dr. Buck; "Otitis Media Hæmorrhagica," by Dr. Pomeroy; "Angioma of the Auricle," by Dr. Kipp; and "Experiments on the Effects of Quinine on the Ear," by Dr. Roosa. The Society originated at Newport in 1867, and now numbers about sixty members.

Probably the most interesting case reported at the Ophthalmological Society was one of Dr. Knapp's, in which he removed a tumor of the optic nerve (scirrhous), involving its whole intra-orbital tract, without ablation of the eyeball. It is believed that this is the first time that this operation has been performed; and one of the principal points of interest in connection with it is the demonstration to how great an extent the optic nerve and muscles of the eye will admit of being stretched. Before the operation the tumor occasioned very great pain and deformity, forcing the ball forward and downward; but the patient is now in excellent health, and there is no evidence of any return of the disease or of cancerous deposit in any other part of the body. This Society was organized eleven years ago, in New York, the late Prof. Delafield being its originator, and now has about seventy members in different parts of the country, selected from those of the profession specially interested in ophthalmic science and art. PERTINAX.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JUNE 24, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. EDWARD L. PARKS presented, for Dr. F. F. MAURY, the following specimens, and read their histories:

"*Larynx of a man strangled with a piece of meat, together with the bolus.*"

"P. M., about 50 years of age, after a hurried dinner, seated himself in an eating-saloon. Soon violent symptoms of strangulation followed, which failed to dislodge the foreign body, and in about five or ten minutes he died."

"The notes of the examination are, 'External ap-

pearances normal, except a slight scratch over left eye. Slight post-mortem discoloration. Pupils natural.

"The trachea and larynx being removed, a large bolus of meat, weighing about 3iv to 3vi, was found impacted in the larynx."

"Punctured wound of chest-wall, with incised wound of aorta."

"F. R. was stabbed in the back with a long, pointed knife. He fell upon the floor, blood poured plentifully from the wound, and in a very short time, probably not more than three minutes, he was dead. There is no history of a stab elsewhere, though another was found after death.

"The notes of the examination are,—

"Post-mortem discoloration on the posterior portion of the body. A wound was seen two inches above the inferior angle of the left scapula, and two and a half inches from the median line. This wound was three-fourths of an inch in length, and ran obliquely downwards and outwards. On removing the flap of skin covering this part of the body, a large coagulum was observed lying between the skin and underlying tissues. The wound in this position was one inch long, and one-half inch from the spine, and penetrated the chest between the seventh and eighth ribs. The lower border of the seventh rib was sharp, caused by contact of the wounding instrument. On the anterior left aspect of the body, about six inches above the anterior superior spinous process of the ilium, and between the tenth and eleventh ribs, a wound was found, extending obliquely downwards and inwards. On removing the flap of skin covering this portion of the body, the external wound was found to correspond to a point immediately above the tenth rib, and about four inches from its anterior free margin. It had no connection with the thoracic or abdominal cavities. Had this wound penetrated deeper it would have passed into the abdominal cavity under the diaphragm.

"There was an escape of bloody serum from the mouth, but no marks of violence about the head.

"Pupils somewhat dilated, balls of eyes normal.

"Firm pleural adhesions over both lungs, of old standing. Lung-substance normal. The left pleural cavity contained a clot, as well as some fluid blood.

"Pericardium firmly adherent to the heart. Heart normal.

"An incised wound was found to sever almost the half of the ascending arch of the aorta, in a line directly opposite the seventh and eighth ribs, and opposite the external wound on the posterior left lateral part of the body, as before described."

"Fracture of the cranium."

"T. W., 37 years old, born in Scotland, was brought, intoxicated, to the Philadelphia Hospital the 2d day of last May. When seen by the resident physician at 2.30 in the afternoon, he was asleep, and was not aroused. When seen again in the evening of the same day, he was still unconscious. Pulse 84, pupils slightly contracted. 'He appeared,' writes the resident physician, 'like one who had been drinking to excess and engaged in a drunken brawl.'

"He remained unconscious till the evening of the next day (May 3), when he gave his name, complained of headache, and answered some questions intelligently, though he could not tell how he had been hurt. There was much tenderness over the whole surface of the head. Pupils continued contracted, as they had been since his admission. There was an effusion of blood into both eyes, around the orbits, and over the right mastoid process.

"In the afternoon of Tuesday, 4th, he began to relapse into unconsciousness.

"Wednesday, 5th, he was quite conscious, and complained of a severe headache.

"Thursday, 6th, he complained of severe pain, radiating from the temples over the forehead. His mind was clear, and he had perfect use of all his limbs. His pulse had been gradually falling since his admission, and on the evening of this day was 54 beats a minute; respiration, 18; temperature, 98°.

"Friday, 7th, morning, his hands and feet were cold pulse 50, and there was slight ptosis. Great restlessness during the day. In the forenoon he lost control of his sphincters. In the afternoon he became quite unconscious. At noon his temperature was 100°; at 7 o'clock in the evening his temperature was 102°, pulse 98, respiration 26, with complete loss of motion and sensation.

"He died at 8.30 P.M., five days after admission.

"When first seen, he was ordered fifteen grains of blue mass. Subsequently, blood was twice taken by cups from the back of the neck and from the temples, with marked relief each time. Blisters and ice were also used.

"At the coroner's inquest, it was ascertained that he was pushed violently backwards from the door of a drinking-saloon, and fell, striking his head against the pavement.

"From the notes of the post-mortem examination we select the following:

"On removal of scalp, crown was seen to be discolored by blood. Temporal fascia of left side was injected, also the whole posterior aspect between scalp and pericardium.

"A fracture was seen, which commenced at centre of skull, above the external occipital protuberance, and passed irregularly but directly to right side of skull ending at junction of squamous portion of temporal bone. There was a free escape of bloody serum before removing the skull-cap. After removal of skull-cap, the fracture was found to traverse the skull from the inferior angle of the parietal bone of one side to that of the other. The length of the fracture, by actual measurement, was twelve inches.

"Brain was injected, and clots found in its substance, and a large coagulum was found in the anterior portion of the cranial cavity. A clot on the left side was very adherent, and was semi-organized.

"The ventricles were normal. There were evidences of softening around the seat of injury; also a large abscess on left side.

"Cerebellum normal.

"Cause of death, fracture of skull, as described, followed by an effusion of blood into the cranial cavity."

"This case is valuable for several reasons: the length of the fracture, and the symmetry of the injuries to each parietal bone. Though strongly suspected, the fracture was not distinctly recognized during the life of the patient. Nor should we expect otherwise, since the clear-cut edges were held in close apposition by the scalp, occipito-frontalis muscle, temporal fascia, and periosteum, aiding the natural position of the bones. No crepitus, preternatural mobility, or deformity was to be found to point out that there was a fracture."

Gunshot wound of the eye—Excision of the eyeball.

Dr. JOHN ASHHURST, JR., exhibited an eyeball, removed a few hours before from a colored man, 38 years of age, who entered the Episcopal Hospital on May 30, 1875, suffering from a gunshot wound of the left upper eyelid and eye. Vision being lost, and the eye manifestly disorganized and moreover very painful, excision was resorted to.

The specimen was referred to Dr. W. F. Norris, as a special committee.

Dr. ASHHURST also exhibited a specimen of *rupture of the external iliac artery*, and read a history of the case, which is published in the current number of the *Times*.

Fibroid tumor of the uterus.

Dr. JAMES TYSON presented the specimen, for Dr. FRANCIS L. HAYNES, who furnished the following history:

"Mary M., aged 32, was treated for uterine disease in 1873, at the University Dispensary; among other means, sponge tents were employed. Receiving no benefit, she discontinued treatment for a time, and finally came under the charge of Dr. H. in October, 1873. A subperitoneal fibroid was detected by bimanual palpation. Under the internal administration of fluid extract of ergot, the flooding (which was her principal symptom) rapidly diminished, and in a short time she considered herself well. Examination revealed no change in the fibroid.

"The patient was now lost sight of until June 5, 1875, when Dr. H. was called to attend her, and found her in a collapsed condition, and suffering from intense abdominal pain, with constant vomiting. A strangulated inguinal hernia was discovered. She had been treated for 'cramps' by a homœopathic physician for eighteen hours previously. The hernia was reduced, and one-half grain of morphia given hypodermically. The vomiting and pain immediately ceased, but the patient never reacted, and died after twenty-four hours' illness.

"On post-mortem examination, the intestines were intensely congested, and presented a pinched appearance at one point, showing the site of the hernia. About four ounces of bloody serum were found in the pelvic cavity, with other evidences of local peritonitis. The fibroid tumor had evidently increased in size since 1873. The right Fallopian tube was dilated at its extremity, where it presented a small opening, from which was issuing a fluid of a tarry appearance.

"It was impossible to learn the immediate previous history of the patient; but it was known that she was menstruating at the time of her death."

GLEANINGS FROM OUR EXCHANGES.

A SPEEDY METHOD IN ASPHYXIA (*The Medical Record*, July 31, 1875).—Dr. Harvey L. Byrd believes that the following method will be found a highly valuable addition to our list of remedies in the asphyxia of children, and also for the relief of that condition in the adult, when properly applied:

Bring the *ulnar* sides of the hands near together, with the palmar surfaces locking vertically, and place them beneath the back of the infant, so that the extended thumbs may aid, as far as possible, in sustaining the vertex and inferior extremities; then, keeping the *ulnar borders* near together so as to form a fulcrum, the radial borders or sides are simultaneously depressed to as great an extent as practicable—say forty-five degrees—below the horizontal line, and then gradually pronated or elevated to as many degrees above that line, thus facilitating the escape of air drawn into the lungs during the downward movement of the head and chest. Or the hands are placed as at first, and passed beneath the body of the child,—on its back; and the superior and inferior extremities farthest from the operator seized, one by each hand, near the trunk,—the *ulnar borders* of the hands and wrists forming the fulcrum,—the head of the child being kept at a proper axis with the movements of the chest by the hands of an assistant, and

the depression and elevation of the head and lower extremities proceeded with as already described. These alternate depressions and elevations of the two extremities, performed in a regular and gentle manner, and repeated at proper intervals, seldom fail in establishing respiration where it is possible of accomplishment. The occasional dashing of cold water on the epigastrium during the *descent* of the head and chest will hasten respiration where the first few movements fail in its establishment. It is important that the head be kept, as far as practicable, from too much *lateral* movement, and not permitted to depart considerably from its *antero-posterior* axis with the vertebral column during the continuance of the process. To this end, in a critical case, the hands of an assistant may be brought into requisition. The importance of these remarks will be apparent to intelligent readers on a moment's reflection. No impediment should be *permitted* in the way of *free entrance* of air into the lungs during the *downward* movement of the head. And it is scarcely less important that no obstruction should prevent the *escape* of air during the *upward* movement of the head and chest.

LOCALIZATION OF FUNCTIONS IN THE BRAIN (*The Boston Medical and Surgical Journal*, July 29, 1875).—In a recent lecture, Dr. Brown-Séquard alluded to the various theories in the localization of functions in the brain, and to the fact that the character of the symptoms in brain-diseases is not in the least dependent upon the seat of the lesion, so that a lesion of the same part may produce a great variety of symptoms, while, on the other hand, the same symptoms may be due to the most various causes,—various not only as regards the kind but also the seat of the organic alteration. In view of these facts, he has been led to believe that lesions of the brain produce symptoms not by destroying the function of the part where they exist, but by exerting over distant parts either an inhibitory or an exciting influence, or, in other words, either by stopping an activity or by setting it in play. He concluded that if we survey all the facts brought forward to support the supposition that there are distinct psycho-motor centres in the brain, belonging to each set of muscles performing a distinct kind of movement, we find that it is impossible to admit that these centres occupy a separate, well-defined, and limited territory in some of the convolutions of the anterior and middle lobes of that organ; and we find also that the supposition that the nerve-cells endowed with each of the primary functions of the brain are disseminated through that organ, so that no local lesion or irritation can reach more than a part of those endowed with the same function or the same kind of activity, is supported by most of the known facts and out of harmony with none.

ABSCESS OF THE LIVER (*New York Medical Journal*, August, 1875).—Dr. S. W. Dana read before the Academy of Medicine the case of a man, æt. 52, who complained of severe pain over the region of the stomach, which was accompanied with vomiting. This improved for a time, but returned with greater severity. The case showed the marked influence of malarial poison, being characterized by chills every alternate day. Jaundice followed this malarial seizure, and was accompanied by an increase of pain over the liver. Physical examination showed the hepatic dulness to extend two inches below the level of the ribs. After this the patient began to improve, and the jaundice materially lessened, though the chills continued. He, however, afterwards relapsed and died. A few months before his death a tumor was detected below the ribs, which, as proved by the autopsy, was due to the formation of an abscess. When the post-mortem examination was made, the liver was found adherent to the abdominal parietes. Its lower margin extended two inches

below the margin of the ribs, but it was smaller than normal. The right lobe contained an abscess two and one-half inches in diameter, and one-half inch deep. The spleen and other lobes of the liver were normal. The points of interest in the case are mostly involved in obscurity. The cause of the abscess was unknown. There was nothing to show that disease existed in the intestines, and there was no history of injury to the liver.

SPINA BIFIDA SUCCESSFULLY TREATED BY PUNCTURE AND INJECTION (*The Indian Medical Gazette*, June 1, 1875).—Mr. G. W. Eate reports the case of an infant aged one month, the subject of spina bifida. Its general health was very poor, the lower limbs were paralyzed, and the tumor, the size of a large orange, and situated in the lumbar region, was ulcerated on its summit, and was extremely sensitive.

Pressure having been made on the tumor in the direction of the median line, and the space where the spinous processes of the vertebrae were wanting discovered, a trocar and canula were carefully introduced into the most depending position, and a quantity of clear fluid drawn off. The removal of this fluid was followed by collapse of the tumor. Into the sac, which, however, was not thoroughly emptied, two drachms of a solution of iodine (iodine, ten grains; iodide of potassium, thirty grains; glycerine, one ounce) were injected with an ordinary syringe, the solution being diffused throughout the sac by gentle manipulation; the canula having been withdrawn, the opening was closed by a strip of adhesive plaster, and a light compress of lint applied over the tumor.

The operation was well borne, and not a single bad symptom resulted from it. The tumor gradually diminished, until it is now about the size of a walnut. The child recovered with its general health greatly improved, with no pain in what remains of the tumor, and with some indications of strength in the lower limbs.

ARNICA IN ORCHITIS (*The British Medical Journal*, July 17, 1875).—Mr. H. G. Knaggs reports a method of treating orchitis, which, he says, he has for many years found very effective. It consists in the more or less constant application, while the patient is resting, of a lotion of tincture of arnica and water (one part of the former to six of the latter) to the affected organ; secondly, in rubbing in an embrocation composed of one-third or even one-half tincture of arnica and soap-liniment two or three times a day along the course of the spermatic cord; and thirdly, in the internal administration of seven-drop doses of tincture of arnica, combined, when there is febrile disturbance, with two-and-a-half-drop doses of Fleming's tincture of aconite and acetate of ammonia. This simple treatment, he says, generally cures the patient in a fortnight or less. In using our remedial agents of the above-named strength, there is little danger of causing cutaneous irritation; but it must be admitted that, while some skins will bear the constant application of even pure tincture of arnica for a considerable time, there are others which are inconceivably sensitive to the action of the drug. We must, therefore, be on the watch for any show of erysipeloid inflammation, in case such should occur.

QUINIA AS A STIMULANT TO THE PREGNANT UTERUS (*The Obstetrical Journal*, June, 1875).—Dr. Albert H. Smith sums up as follows the conclusions which he has adopted as regards the action of quinia upon the pregnant uterus:

1. Quinia has no inherent property of stimulating the gravid uterus to contraction, being inert as to any effect upon the womb in a quiescent state, and having no decided action in accidental labors at any period of gestation.

2. To its property as a general stimulant and pro-

motor of vital energy and functional activity, and to that alone, is due its influence upon the uterus in normal parturition, producing then no action peculiar to itself, but merely increasing the power of the uterus to expel its contents by its own natural method, converting what is a defective or even pathological action into a simple physiological process.

3. By availing ourselves of this power we may, by administering full doses of the sulphate of quinia at the onset of labor, favor the rapid and safe termination of what might otherwise be a tedious and exhausting work.

THE CHEAPER CINCHONA ALKALOIDS (*The Chicago Medical Journal*).—Dr. James S. Whitmire has for several years been employing in his practice the sulphates of cinchonina, quinidia, and cinchonidia, and even the residue—chinoidine. Cinchonina he has found unsuitable for use as an antiperiodic or antipyretic, because of its tendency to nauseate the stomach; but in smaller doses, in connection with the tincture of iron, he has found it useful as a general tonic. Forty grains of quinidia seemed to be equivalent to about twenty-five of quinine.

Dr. Whitmire is disposed to attribute to cinchonidia very nearly, if not quite, an equal therapeutic value with that of quinia, and in about the same doses, while its commercial value is only one-third that of the latter. Chinoidine he employs as a powder in three- to four-grain doses, after each meal, alternating it with Fowler's solution, and he has been very successful through its means in preventing the recurrence of intermittents.

SALICYLIC ACID IN DIPHTHERIA (*The Virginia Medical Monthly*, August, 1875).—Dr. Fontheim has treated with salicylic acid thirty-one patients having diphtheria. The severest cases were cured after eight days' treatment; the milder ones after two, three, and four days. Of the thirty-one cases, none died. There occurred no cases of diphtheritic inflammation of the kidneys, nor were there any cases of paralysis of the palate. In the severe cases, Dr. F. ordered the affected parts to be rubbed every three hours with a sponge dipped in a solution of salicylic acid, and to take as regularly a teaspoonful of the same solution. The formula used was: R Salicylic acid, 2 grammes (about 3ss); fountain water, 200 grammes (about 3vij); alcohol, q. s. (to make f3vij). Salicylic acid passes rapidly into the urine, and gives with chloride of iron a blue or violet reaction.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 10, 1875, TO AUGUST 16, 1875, INCLUSIVE.

BACHE, DALLAS, SURGEON.—Leave of absence extended one month. S. O. 45, Headquarters of the Army, August 10, 1875.

FORWOOD, W. H., ASSISTANT-SURGEON.—Granted leave of absence for one month, S. O. 155, Department of Texas, August 6, 1875; and leave extended two months. S. O. 46, Headquarters of the Army, August 12, 1875.

TAYLOR, B. D., ASSISTANT-SURGEON.—Assigned to duty at Fort Snelling, Minnesota. S. O. 149, Department of Dakota, August 5, 1875.

NEWLANDS, W. L., ASSISTANT-SURGEON.—Assigned to duty at Camp Halleck, Nevada. S. O. 87, Department of California, August 6, 1875.

TESSON, L. S., ASSISTANT-SURGEON.—Assigned to duty at the Military Prison, Fort Leavenworth, Kansas. S. O. 143, Department of the Missouri, August 9, 1875.

The following-named Assistant-Surgeons (recently appointed) are ordered to report by letter to the Commanding Generals of the Departments named, for assignment to duty:

CURTIS E. PRICE, Department of California.

H. S. TURBILL, Department of Texas.

JOS. Y. PORTER, Department of the Gulf.

GEO. E. LORN, Department of Dakota.

S. O. 163, A. G. O., August 12, 1875.

SATURDAY, AUGUST 28, 1875.

ORIGINAL COMMUNICATIONS.

PARACENTESIS THORACIS.

A Lecture before the Oxford, Pa., Medical Society,

BY JAMES TYSON, M.D.,

Professor of Pathological Anatomy and Histology in the University of Pennsylvania; one of the Physicians to the Philadelphia Hospital, etc.

(Continued from page 740.)

THE quantity of fluid drawn from a chest in paracentesis is often enormous. Eighty ounces are not uncommon, and fifty to sixty are moderate amounts. At one time it was thought that only a part of the fluid should be drawn off at one sitting, lest syncope should supervene. This is now well known to be unfounded, and such partial evacuation is no longer thought necessary. But I myself prefer not to empty the chest completely, because I think I have observed that the violent pain, already alluded to as occurring after the tapping, is less likely to happen when some fluid is left behind, while its speedy disappearance by absorption is almost certain to take place if the inflammation has subsided, in consequence of diminished pressure upon the blood-vessels.

It sometimes happens that towards the close of the operation bloody serum and finally pure blood flow from the canula. This need not give any alarm, but the canula should be withdrawn and the operation discontinued, as the hemorrhage, which probably takes place from ruptured vessels in the false membrane, is best checked by the prompt coagulation and consequent pressure which thus result.

In terminating the operation, the canula is withdrawn and a piece of adhesive plaster of considerable size closely applied over the aperture and adjacent integuments. The edges of this may be overlapped by other pieces if desired. No other precautions are necessary, and under ordinary circumstances the opening is completely closed within twenty-four hours.

Not infrequently a fluid will reaccumulate, even if it be a simple serosity. This is more particularly the case when, as intimated, the inflammatory action has not subsided up to the time of tapping. Under these circumstances, it may be repeated as often as is necessary to secure the comfort of the patient and his final total relief. But if the fluid be a *purulent* one, it will almost invariably accumulate, and the difficult problem of getting permanently rid of an empyema is by no means successfully solved to-day. If it be known in advance to be an empyema, no precautions need be taken to keep the air from reaching the cavity; but, as this is scarcely ever certain the first time the tapping is done, one of the special apparatuses for aspiration may be used for this reason, and for the sake of the other advantages named with regard to them.

But suppose you have found an *empyema*, what will you do with it? After completely evacuating the chest, I have always after the first tapping closed

the opening as usual, although there is perhaps little good reason for this, so sure is the pus to reaccumulate. Still, besides the fact that there is some chance for a non-reaccumulation, it is sometimes well not to do too much at one time. The patient has been relieved, but the operation has been to him an alarming one, and I can conceive ordinarily no disadvantage in waiting for a reaccumulation. This having occurred, however, a sufficient opening must be made with a bistoury, and a drainage-tube introduced, such as I show you, with an incurvation downward, so as not to injure the lung. A stopper may be supplied by the instrument-maker, or one may be improvised. This being done, the accumulating fluid can be evacuated daily or as desired.

But you will not be likely in this way to get rid of it entirely, although in the patient I show you to-day I do not ascribe the gradual diminution of the flow to any other local treatment. Of course, I need not say to you that such cases require constitutional treatment of the most supporting and antipyretic kind. Nourishing food, alcohol, quinine, iron, and digitalis are pre-eminently indicated. But some local treatment is usual, the object of which is to excite cohesive inflammation between the costal and pneumal pleuræ. Hence it is of an irritating character, and the preparations of iodine are those usually employed. The strength cannot be unvarying, but will depend upon the irritability of the membrane. Trousseau, whose experience was so extended, recommended 50 grammes (771½ grains) of tincture of iodine (the French tincture is a little stronger than the American), 2 grammes (30.86 grains) of iodide of potassium, and 100 grammes (154.3 grains) of water, making a total of 152 grammes, or 4.88 ounces by weight. To this he added an equal quantity of tepid water, and injected the mixture into the chest-cavity, in which some fluid had been allowed to remain. After allowing this mixed fluid to come into contact with the chest-wall, a portion was drawn off, in order to obviate any toxic effects of the iodine, and the drainage-tube closed. On the next day the tube was opened, a portion of the fluid allowed to run out, and the injection repeated in the same manner. This was done for several days in succession, the quantity and strength varied according to circumstances,—pain, fetor, tendency to contraction, etc. Then the interval was made longer, once in two, three, or four days, taking care to empty the chest at least once in twenty-four hours. The treatment thus instituted is continued four, five, six months, and even longer. My own plan has been to use the tincture of iodine and Lugol's solution daily and at longer intervals, according to the degree of irritation; although I have never allowed the solution of iodine to remain longer than a few minutes to half an hour. My experience has not been very extensive, but it is impossible for me to say that the favorable results obtained are to be attributed to the iodine injections. Carbolic acid has been used for the same purpose, especially where there is extreme fetor.

This treatment of course involves the necessity of extreme deformity of the chest, due to external

atmospheric pressure. The lung being compressed into one corner of the thoracic cavity, and bound down there by adhesions, cannot at once return to its original position, while the evacuation of the fluid makes a vacuum, which, being only partially filled, allows the chest-walls to be pushed in by the external atmospheric pressure. This takes place the more rapidly and painlessly the younger and more pliant the chest-walls are, the more slowly and more painfully the older and more rigid those walls. It soon, however, becomes very marked under either circumstance. So too, in the course of time, if the case does well, this deformity gradually diminishes as the lung recovers its original volume, but months and even years are required for its completion, which perhaps occurs only in children.

In the case to be exhibited, some slight discharge continues daily through the fistulous opening which remains, and which we have been unable to cause to disappear entirely by the iodine injections; though it must be admitted that they have not been so perseveringly continued as is suggested by Trouseau, on account of the pain and discomfort which were occasioned by their use.

It remains to refer to the effect of removal of fluid from the chest upon the physical signs of auscultation and percussion. If the case be an acute one, or the effusion comparatively recent, if the evacuation be complete, dull percussion is replaced by resonance, and the respiratory sounds are again heard, including the vesicular murmur. But if the case happen to have been of some duration, and especially if the lung is much bound down and the pleuræ greatly thickened, it will often happen that the dulness is scarcely if at all diminished, and the vesicular murmur as faintly heard immediately after tapping. If the accumulation is kept down, however, the normal condition of affairs is gradually reproduced.

In conclusion, I desire to exhibit a couple of cases illustrating the two conditions under which the operation is most likely to be indicated.

Latent pleurisy with effusion—Paracentesis—Recovery.

I first saw J. H., aged 22, on the 5th of May, 1874, in a condition which proved to be the beginning of a typhoid fever. The disease passed through the various stages of a well-marked but not very severe form, and convalescence seemed decidedly established on May 20, so that I omitted a visit on the following day, which was Sunday. I saw him on Monday morning, when I was not impressed with anything unusual in his condition. While at dinner, however, on this day, I was summoned to see him on account of a feeling of extreme faintness and difficulty in breathing which had come over him. I auscultated his heart, found it beating rapidly, but exhibiting no sounds of valvular lesion. Not thinking of examining his chest further, I ascribed the condition to some temporary cause. On the next day, however, the symptoms continuing, I explored his chest, and found dulness from top to bottom of the left side, feeble and in places absent respiratory sounds, and diagnosed the presence of fluid. How long the effusion had been present it is impossible to say; but, from the sudden change in his symptoms, I am confident it was of rapid production, and did not exist in large amount prior to May 30.

Previous to his illness he had a slight hydrocele,

which increased rapidly, and became very troublesome by its size, during his illness. Diuretics were given for a few days without effect, when I urged tapping as the shortest route to recovery. I punctured the chest between the ninth and tenth ribs, on the line of the lower angle of the left scapula, and drew off between sixty and seventy ounces of limpid fluid, using the aspiration apparatus recommended to you and the exploring trocar only, as the fluid passed out so rapidly that I did not think it necessary to substitute it by a larger one.

From that time convalescence was rapid. The normal physical sounds rapidly returned, and in two weeks he was up and about. I am confident that as many months would have elapsed before he would have been as well under any other treatment, if, indeed, he would not have succumbed altogether; for his condition after the long attack of fever was one of extreme debility, which did not diminish until after the tapping. The lung entirely reoccupied its original situation, and there was never any subsequent deformity of his chest. To-day he is before you, exhibiting in the shape or physical signs of the chest no evidence of his extreme illness, in all respects a sound man.

The next case is one of unusual interest, being one of practical recovery from *empyema*, which I have watched for nearly three years, and which but for the procedure adopted would have been necessarily fatal. It illustrates, also, the effect, or want of effect, of a faithful trial of other treatment continued over a long period, and exhibits the gradual return of a much displaced heart and compressed lung to their normal relations.

Pleurisy with effusion—Empyema—Paracentesis—Recovery.

C. B., æt. 21, a native of Ireland, single, a shoemaker, moderate drinker. His parents are healthy, and his previous health was good. In December, 1871, he was attacked with a severe pain in the left breast, over the region of the heart, lasting about twelve hours. This was relieved by a mustard-plaster, but he was not able to go about for a week, and did not enjoy good health during the following year; complaining, however, of no pain, but merely of weakness.

On January 5, 1873, he contracted a bad cold, with pain in the left side, some cough and fever, for which he was admitted to the Philadelphia Hospital on January 7, 1873, having at the time of admission a pulse of 120, temperature 104°, and respirations 30.

January 22.—Inspection revealed evident filling up of intercostal spaces on the left side, below the nipple anteriorly, and laterally from axilla down. Percussion was dull throughout, back and front. Auscultation revealed marked tubal breathing immediately below the left clavicle, and the vesicular murmur was audible anteriorly only as far as the left nipple; below this it could not be heard, nor in the axilla. Over the upper part of the left lung, posteriorly, it was heard, but became indistinct as the base of the chest was approached, and finally disappeared. No vocal fremitus was appreciable anywhere over the left lung, except at its apex. The heart's impulse was seen to the right of the sternum, discernible from lower edge of second rib to upper edge of fifth, and extending to the right as far as the nipple line. There was also marked movement of the abdominal wall below the xyphoid cartilage, and in this situation also the first sound was heard most distinctly, and a very little higher up the second sound, which was loudest at the right edge of the sternum, and over the sternum itself, opposite the second interspace.

Treatment.—He was ordered the iodide of potassium (ten grains *ter die*), while the chest was to be kept painted with tincture of iodine.

February 7.—Says he is stronger, but complains more of dyspnoea, though we are unable to say, by inspection, that there is greater protrusion of the chest-walls. Physical signs remain as above noted. Has been taking the iodide faithfully, and has had the iodine applied externally more or less constantly.

March 10.—Removed twenty-seven and a half ounces of a sero-purulent fluid by a puncture by trocar and canula, between ninth and tenth ribs, in a line with angle of scapula. On microscopic examination the fluid was found to contain pus-cells in different stages of granular degeneration; also numerous compound granule-cells. The patient expressed himself greatly relieved after the operation, and said he felt as if he could lie down and sleep all day.

April 2.—Twenty-five and a half ounces of sero-purulent fluid were drained off with trocar and canula.

April 4.—Forty-eight hours after the tapping above mentioned, physical exploration revealed impulse of heart in same situation as previously noted; so also the heart-sounds. The respiratory sounds are audible as far as left nipple anteriorly, but not in the axilla; posteriorly, tubal in character, they are heard in supra-spinous fossa, and nearly normally in infra-spinous fossa; below the scapula they are feebly heard. Respiratory sounds continue supplemental on right side. Inspection shows less prominence in mammary region, though in other respects the conformation of side is not altered. Patient says he feels better than he has felt for nine months.

April 14.—General condition continues good, though he complains of being weak. Vesicular breathing is heard anteriorly only as far as nipple, and is not heard in axilla. It is heard distinctly in supra-spinous fossa, posteriorly, faintly over scapula below its spine, and very faintly, if at all, below angle of scapula. Ordered Basham's mixture, tablespoonful *t. d.*, and iodide of potassium to be continued.

May 2.—He feels better and stronger than he did two weeks ago. Inspection reveals no change in appearance of chest. There is flat percussion throughout entire left thorax. Auscultation unchanged. Treatment continued as last noted.

May 17.—Complains of increased difficulty of breathing, for which ordered blister.

May 21.—Drew from his chest, before the class, forty-two ounces of sero-purulent fluid. Forty-eight hours later there was evident reduction in bulging of chest. At this time, also, dulness seemed slightly diminished; respiratory murmur was heard as far down as heart's dulness anteriorly, and throughout whole left chest posteriorly, but not in axilla.

June 2.—He is feverish, feeble, skin warm, pulse 99, respiratory murmur is no longer heard below left clavicle, being entirely replaced by bronchial breathing, and there is dulness throughout the chest.

June 8.—Drew from chest fifty ounces of sero-purulent fluid, which was much more consistent. This tapping gave him great relief.

June 11.—Chest again tapped, this time in the seventh interspace, and drainage-tube introduced, through which pus ran freely to the amount of fourteen ounces. During remainder of day it ran sixteen ounces; on the 13th, twenty-four ounces; on the 14th, forty-two ounces (last two ounces being of a pink color); on the 15th, five ounces, some pink color present; on the 16th, one ounce, pink disappeared. Has been losing strength and flesh during past ten days; but his pulse now is less rapid and skin cooler than immediately before drainage-tube was introduced. Pulse now is 99. On last date, the physical signs noted were as follows. There is such

hyper-resonance throughout the chest as of itself to suggest pneumothorax; there is an audible entrance and exit of air through the tube with both respiratory acts. Auscultation reveals metallic respiration over the whole chest anteriorly, in the axilla, and below the scapula posteriorly.

June 18.—General condition much better. Pulse 100, skin cool, temperature 98°. Physical condition can scarcely be said to be altered, although there is not so much pneumothorax.

June 30.—He is vastly better. The quantity of pus discharged has gradually diminished until yesterday, when only half an ounce of thin, turbid serum was discharged, and this morning nothing flowed from the canula. His temperature this morning is 98.3°, and pulse 96. There is a slight evening exacerbation of both, temperature being 99°, and pulse 110. Has been allowed a farm-pass to-day.

July 2.—Discharge so much reduced that the canula was removed, and the opening closed with adhesive strips.

July 5.—Chest-walls are evidently bulging. Reopened the orifice, and five ounces of the thin, turbid fluid were discharged. This fluid, which is like that discharged during the last few days previous to the removal of the canula, has not the appearance of pus, being darker in hue and thinner.

July 14.—Discharge again purulent, but he continues doing well; has recently been ordered a pill of quinine, *gr. j*; digitalis, *gr. ½*; carbonate of iron, *gr. ij*.

July 23.—Does not appear quite so well; has a temperature of 100°, and a pulse of 120; last night pulse 106, and temperature 99°. Is disposed to be sleepy. The quantity of pus discharged is small, being but one ounce yesterday.

July 29.—Has revived from the drooping condition, and chest is discharging two ounces a day. Inspection reveals marked depression of the left chest anteriorly, below the clavicle; this is not noticeable laterally or posteriorly. An impulse is seen and felt in the second and third interspaces for two inches on each side of the sternum. It is most marked to the touch and to the eye in the third interspace, to the *right* of the sternum. On percussion the left chest is found resonant throughout anteriorly and in the axilla, while at the same time there is an absence of that hyper-resonance previously noticed on June 16. Posteriorly, however, throughout, the resonance is less marked than anteriorly and in the axilla. Auscultation reveals a total absence of metallic respiration, while in the upper part of the left chest, anteriorly and posteriorly, the air can be heard going into the finer bronchial tubules, attended, anteriorly, with some crepitation. Below the nipple anteriorly, and in the lower part of the axilla, a friction-sound is heard. Below the left scapula, broncho-vesicular breathing is heard. The first sound of heart is heard most distinctly at the lower third of the sternum, and the second sound is most distinctly heard at the second costal cartilage of the right side. At this situation a systolic murmur is also heard.

August 22.—Chest is resonant throughout, posteriorly as well as anteriorly, and air is undoubtedly heard entering the lungs throughout. The depression anteriorly continues, and is noticeable to the right of the sternum. Is discharging one-half ounce to one ounce of pus daily from the canula. Has occasional attacks of palpitation, of which digitalis relieves him (*gtt. x, t. d.*). Pulse 90.

October 8.—Is still improving, and gaining flesh decidedly. There has been no retraction of chest-wall during the last month. Pus discharging about as last noted. The impulse of the heart is now felt most distinctly one and a half inches to the right of, and one-half inch below, the left nipple, though an impulse is

still discernible at the right edge of sternum, directly opposite. The first sound is heard most distinctly at the situation of the apex-beat, and is accompanied by a shrill creak with every systole; as the ear is moved upwards towards the right of the sternum in the second interspace, where the second sound is heard most distinctly, this shrill noise disappears and is replaced by a murmur.

He was discharged during October, 1873. A week after his discharge he entered St. Joseph's Hospital, where he received, during five weeks, tonic treatment, but no injections into the cavity. During this period, he says, he grew gradually weaker, and lost appetite and flesh. At the end of the fifth week injections of carbolic acid were used. From the beginning of this treatment he improved in every respect, and the amount of pus discharged decreased from five ounces, the amount it had reached, to one-half ounce daily. It will be remembered, however, that the discharge fell to this amount in the Philadelphia Hospital without injections. He remained in St. Joseph's Hospital for seven months, when he was discharged. For four succeeding weeks he was in St. Mary's Hospital, where he received no injection treatment.

On June 19, 1874, he was readmitted to the Philadelphia Hospital, with a daily discharge of two ounces of pus. He was put on Basham's mixture, and quinine.

July 10.—Was injected with one ounce of solution containing pot. iodid., gr. ij; and iodine, gr. j; in water.

July 12.—Two ounces of the same solution were thrown in. Since the injection the discharge of pus has increased to three ounces.

August 21.—Injected f3ij of liq. iodin. comp. in four ounces of water.

October 20.—The above solution was used until it seemed to excite pain and produce a bloody discharge, without apparently diminishing the amount of fluid. It was then omitted altogether, and in the course of a few days the bloody discharge ceased, and then continued to discharge daily about two ounces of purulent matter, sometimes a little more, seldom less.

About October 10, recommended injecting him with a solution consisting of tr. iodinii f3i, water f3i. Of this fluid, about f3vj were injected daily, kept in for ten minutes, and then withdrawn with an aspirator, the fluid coming out with but little change in its appearance. The injection, when introduced, produces a tingling sensation, and excites no bloody discharge. The accumulated fluid is evacuated once a day through a canula, and amounts to about one and a half ounces. He feels perfectly well, only having a little dyspnoea when walking up and down stairs. His left chest is much contracted, and the apex-beat is a little to the right, and below the nipple. He is taking no remedies except tonics and good nourishment. To-day the strength of the injecting fluid is ordered to be increased to f3jss to the oz.

June 25, 1875.—Soon after the above note the injections were discontinued.

In appearance he is looking better than I have seen him since he has been in the house. He weighs about one hundred and twenty pounds. He is able to walk from the hospital to Third and Walnut Streets and return without fatigue, a distance of at least six miles. Observes no shortness of breath in walking on a level; but after ascending three flights of stairs, he observes some dyspnoea at the end of the third.

The opening made by paracentesis, apparently in the seventh interspace, and in a line with the anterior fold of the axilla, remains patulous, notwithstanding the removal of the tube last autumn. From this there is now discharged every evening, when the patient clears the canal with a probe, about one-half ounce of nearly transparent, bloodless, aqueous fluid, free from

odor. This quantity, since the warm weather has set in, is nearly double that discharged when it was cooler. This fluid has an acid reaction, specific gravity 1015, and on microscopic examination reveals numerous pus-corpuscles, with here and there a red blood-corpuscle.

The left chest is extremely retracted, and the ribs evidently drawn down so far as to include the first four ribs, the fifth rib of the two sides corresponding. The inferior third of the thoracic cage on the left side anteriorly is a little more bulging and extends a little lower than the corresponding part of the opposite side. Two impulses are distinctly observed on inspecting the chest, the more prominent at the left edge of the sternum, just below the third rib, this rib appearing to be drawn down, so as to correspond in situation with the fourth rib of the opposite side. On this rib is also placed the nipple, so that this point of more distinct impulse may be said to be an inch below and within the left nipple,—the normal situation. The second more feeble impulse is observed and felt about an inch and a half directly above the first, at the left edge of the sternum and at the second interspace; the second rib being also apparently drawn down as the third.

The first sound of the heart is heard most distinctly in the situation of the apex-beat and in its immediate vicinity, and is apparently normal. The second sound is heard most distinctly at the right edge of the sternum at the second interspace, or its immediate vicinity. The vesicular murmur is heard distinctly over the entire left lung anteriorly and posteriorly. Anteriorly, and in the axilla, resonance is perfect, but posteriorly it is still somewhat impaired, doubtless owing to thickened pleural membrane.

SHALL WE DISPENSE OUR MEDICINES?

BY THEODORE H. SEYFERT, M.D.

THE question as to whether we shall dispense our own medicines or not may appear to be of trivial importance, but in reality it is one demanding our consideration, since it directly affects the interests of the majority of our profession to a greater extent than many are aware of.

Whilst fully appreciating the objections that some gentlemen will urge against any proposition favoring a return to this custom, which is almost obsolete among regular practitioners in large communities, I would, nevertheless, like to direct attention to a few of the advantages connected therewith, hoping in this way to call forth an expression of opinion from those who are inclined to adopt the practice with certain restrictions. Putting aside all feeling of pride and of prejudice, let us ask what benefits are to be derived from assuming this duty which has been delegated to the apothecary.

In the first place, it will bring about a more desirable simplicity in the administration of medicines, thereby enabling us to acquire a more thorough knowledge of their therapeutic power.

An increased simplicity in prescribing has always marked the onward strides of our science. Apothecaries owe their existence to the fact that the busy practitioner of ancient times, who seemed to gauge the efficacy of his formulæ by the greatness of the number and the heterogeneous character of their ingredients, could not bestow sufficient attention upon his patients when he occupied himself with the laborious duty of compounding his own prescrip-

tions. Hence he employed others to perform this mechanical work. It may easily be imagined how little was understood of the therapeutic value of any one substance, when in its administration it was associated with many others of unlike character, and all mixed up together according to the whim of a prescriber who was influenced by the vagaries of his fancy or by erroneous science.

At the present day, however, polypharmacy is no longer the fashion, for it is in direct opposition to the acquisition of therapeutic knowledge, and contemporaneous with our progress is the tendency to a still greater simplicity in prescribing.

From many valuable drugs the skilful chemist has separated their active principles, and with these instruments of power we are every day becoming better acquainted as we wage our warfare against disease and death.

We are desirous of obtaining accurate information regarding the real value and the *modus operandi* of our medicines: therefore we make no elaborate formulæ, but exhibit them uncombined whenever we can consistently do so, in order that we may study their actions upon the system. It is not the multiplicity nor variety of tools which marks the skilful workman, but rather his thorough acquaintance with the few he has judiciously selected for the work before him.

Another important point for consideration is the effect produced upon the mind by dispensing medicines with our own hands. To possess the full confidence of a patient and his faith in our ability to cure, is to hold a therapeutic power of great importance. That this power is greatly lessened by the present system of dispensing is quite apparent, since by affording patients an opportunity to become familiar with our remedies they unconsciously breed a contempt for them, and, giving rein to that love of mysticism which is inherent in human nature, they ultimately put faith in the wonderful little pellets of Hahnemann, or in any other practice which does not appeal to their understanding, but promises the attraction of novelty.

The influence of the mental operations over the functions of the body is indeed powerful. It is often found not only to be the cause of various disorders, but it is also an instrument the physician can frequently use in promoting a cure. Patients will frequently exclaim against the use of certain remedies simply because they entertain erroneous notions concerning their effects, or are skeptical in regard to their remedial virtues. With such people a medicine with which they are wholly unacquainted, dispensed by the hand of the doctor, is far more efficacious than any prepared by the most skilful pharmacist according to written instruction.

And why is this the case? Simply because we appeal to the imagination. We have frequently witnessed the wonderful results attained through this influence, and no one will question our right or our ability to make use of this power in all cases where the welfare of our patient will be advanced thereby, without compromising the interests of morality. It is true that empiricism has owed its success to the advantage it has taken of this faculty

of the mind, and that our homœopathic neighbor appeals to it alone through the instrumentality of his saccharine pellets, his look of wisdom, and his minute questions about all manner of irrelevant things; yet these facts do not militate against the regular physician, who, with a proper regard for his own reputation and the credit of his profession, does not hesitate to make use of a lever so efficient in elevating the sick body to its standard of health.

A little mysticism is not altogether objectionable even to intelligent minds, and it cannot be denied that the Hahnemannian globule, in conjunction with a few hygienic regulations, has "acted like a charm" in dissipating troubles which a more active medication might have increased. The minuteness of a dose will often create the idea that it is one of great power, and this belief certainly aids the remedy in its operation; particularly so if the attention has been directed to the changes it is intended to produce.

In almost all cases of disease I think that the patient will progress most favorably when he possesses no knowledge of the medicine he is taking, but is thoroughly impressed with the idea that it will bring about certain results. In this way bread pills have induced salivation, an emetic has had the effect of a purgative, and a few drops of pure water have brought refreshing sleep to a suffering patient.

Medicines prepared by different chemists vary greatly in their strength, especially those known as fluid extracts and tinctures. Writers upon therapeutics seldom fail to warn their readers of this fact, and enjoin upon them the necessity for being upon their guard whenever using powerful medicines in either of these forms. It is a matter of great satisfaction to be assured of the strength and reliability of the remedies we employ, but this satisfaction can never be ours so long as we adhere to the custom of writing prescriptions which may be compounded at any one of the hundreds of drug-stores that flourish in our midst. By dispensing medicines purchased from chemists in whom we have confidence, we may always feel assured of the extent of their purity and strength.

Then the subject of *dosage* is one of importance. There has been a question in my mind when administering medicines in the form of pill or of powder as to whether I was securing any greater accuracy in the dose than when I ordered a mixture and depended upon the teaspoon or tablespoon method of measuring. If the substances we prescribe were always thoroughly disseminated through each other as well as through the vehicle which holds them, and if all apothecaries exercised the skill required to make a neat division of doses, then there would be no question about it. But we can never rely upon this being the case. As a rule, the fluid form is accepted as being the best and most convenient way of giving medicines; but spoons vary so much in size and shape that we can never be satisfied of their capacity until it is tested. In dispensing there is this advantage: by taking the spoon to be used, and with it measuring the vehicle which is to contain the remedy, we can secure perfect accuracy in the dose.

Perhaps one of the greatest inducements to recur to the old plan of dispensing may be found in the pecuniary benefits to be derived therefrom. An eminent physician, in speaking of the general practitioners of England, declared that they would ultimately raise themselves to be the almost exclusive medical practitioners of the land; "for low prices, with equal qualifications, will in the long run invariably carry the day." People may be embarrassed in determining the qualifications of their medical attendants, but they are never confronted with this difficulty in estimating the expenses. Herein lies the chief attractive point of the "homœopathic" practice. What can be more agreeable than to avoid taking the "nasty medicine," which is almost as expensive as the doctor's visits! For this reason alone there are many who will employ these charlatans while nature is working a cure, or until some alarming symptom induces them to drop the man of sugar and appeal to the wisdom of the "old school" doctor, whom they usually regard as their "sheet-anchor" in the hour of real trouble, but, like the sheet-anchor, he is only thought of when there is danger of a wreck. The druggist's bill is an item of no mean importance, particularly so to those in moderate circumstances, and we need not wonder that there exists a strong desire to escape a bill of this kind, which, in a case of tedious illness, is sometimes as large as that of the attending physician. It is said that a retired apothecary, upon being asked how he had made his fortune, promptly responded, "By selling aqua destillata." Now, aqua *Schuylkillensis*, though not so elegant, is in many instances quite as efficacious, and may be had for nothing. A few drops of aconite, nitre, or morphia disseminated through this vehicle will answer all the purposes of the same mixture put up in a bottle elaborately labelled, wrapped, and tied, and will be the means of saving time, trouble, and expense.

I do not wish to ignore the real value of those honorable and cultivated gentlemen who in the skilful and intelligent pursuit of their calling have made themselves ornaments to the pharmaceutical profession as well as invaluable aids to our own; but there is a class styled "pharmacists" whom we would gladly do without. These men are the vendors (and sometimes the factors) of every variety of patent medicine, agents for homœopathic "specifics," and almost anything else by which they may turn a penny. Many of them are in the habit of prescribing for the sick, the nature of whose ailments they know nothing about; and some months ago my attention was directed to one more enterprising than his fellows, who added to his already onerous duties the "labors" of an obstetrician. This new branch of the business, however, he was soon led to relinquish through the fright he received in a case attended with post-partum hemorrhage.

Dr. George B. Wood, in an address delivered before the College of Pharmacy, says of these irregular practices, "Do you suppose that medical men can with complacency behold their peculiar province invaded, their sources of livelihood cut off, the very bread taken from their mouths? Will they

not be compelled in self-defence to make resistance? and can resistance be made anywhere so effectually as on the ground of your adversary? It appears evident to me that were apothecaries to undertake the management of diseases, physicians would almost universally recur to the plan they have abandoned, and, like their brethren in other parts of the continent, would supply their own patients with medicines." I think it is our duty to discountenance in every way those who are at all open to this charge, and who make the art of pharmacy merely an *addendum* to what may be termed a "general notion" or commission business in articles having no relationship whatever to medicine.

Many will be surprised at the number of remedies in daily demand that are, or can be, used in a very concentrated form, also at the number of solid substances capable of being held in strong solution. Dr. Squibb, of New York, has invented a ready way of accurately dispensing powerful fluids by using a pipette with a capacity of from one to thirty minims. This little instrument is used by plunging it into the liquid in the vial up to the minim mark which indicates the desired quantity, then, closing the upper end with the fore-finger, the charge is transferred to the vessel in which the doses are to be mixed. Dr. Squibb also offers a list of forty-four articles of the active materia medica in their most potent and concentrated form.

Did space permit, I might dwell upon the easy manner in which this mechanical duty may be performed, and enumerate the many valuable remedies that may be prepared in such a way as to occupy but a very small space in the pocket-case, from which they can be dispensed with advantage to ourselves and patients.

1873 COLUMBIA AVE.

NOTES OF HOSPITAL PRACTICE.

EPISCOPAL HOSPITAL.

SERVICE OF LOUIS STARR, M.D.,

Acting Visiting Physician.

Reported by DR. B. J. RUDDEROW, Resident Physician.

CASE OF DIFFUSE PULMONARY GANGRENE FOLLOWING PNEUMONIA.

A. R., 43 years of age, a dyer by occupation, was admitted to the medical ward on July 31, 1875. He had a healthy family history, and, notwithstanding intemperate habits, enjoyed good health himself until 1866. After this time he suffered occasionally from intermittent fever, and had frequent attacks of diarrhœa during the summer months, but was never ill enough to be confined to bed. For the past six months he had been unusually strong and well, though he had made no change in his mode of living.

Early in July, however, he began to have diarrhœa; this, as it was of the same character as he had always had in warm weather, caused him no uneasiness, and he continued to work until the 26th, when he had a severe chill, followed by fever, pain at the base of the right lung, difficulty of breathing, and cough, attended with the expectoration of tenacious mucus. These symptoms continued until he was brought to the hospital, the only change being in the sputa, which became rusty and slightly fetid.

When admitted, he was very weak and much emaciated, having, he stated, lost flesh rapidly since the beginning of his sickness; his face was flushed, his skin hot and dry, and his pulse 120 per minute, weak and compressible; there was considerable pain in the right side of the chest, great difficulty of breathing, and frequent cough, with a free expectoration, the sputa being brownish-red in color, frothy, very offensive, and not at all tenacious; his tongue was heavily coated with a dark-yellow fur. There was almost complete anorexia, considerable thirst, and some tendency to diarrhoea.

On examination, the right side of the chest was found to be slightly bulging, and the intercostal depressions were less marked than on the left side. There was dullness on percussion, with diminished elasticity extending over the whole of the lower lobe; this was most marked posteriorly, in which position there were also bronchial breathing and a few subcrepitant râles. The left lung was normal. The abdomen was tympanitic. The superficial veins of the right side were distended, and on palpation the smooth edge of what appeared to be an enlarged liver could be distinctly felt, extending from two and a half to three inches below the margin of the ribs on the right side. Over this tumor the integuments were somewhat œdematous, and pitted slightly on pressure. There was no ascites. The heart-sounds were feeble, but no murmur could be detected. The urine contained a small quantity of albumen.

The patient was put upon supporting treatment, and a jacket-poultice was applied to his chest.

During the night of July 31 and the following day his condition remained about the same.

On August 2 he was very weak, and slightly delirious, tongue brown and dry, lips and teeth covered with sordes, pulse 120, respiration quick and labored, breath very offensive, cough constant, with free expectoration, sputa very fetid, dark brown in color, containing small tinder-like clots of blood. Physical exploration revealed flatness on percussion over the whole posterior aspect of the right chest, and from the third rib to the base laterally and anteriorly, while above this line the resonance was impaired. Alterations in position caused a moderate change in the level of the flatness on the anterior and lateral surfaces, though none on the posterior. Over the area of flatness the respiratory murmur was feeble and distant, and the vocal resonance and fremitus diminished. These signs were most marked posteriorly; when he was placed on his belly, however, the respiratory murmur was louder, the vocal resonance and fremitus more distinct, and numerous moist râles became audible. Loud bronchial râles, both dry and moist, could be heard on either side of the chest; they were more distinct on the left, where they were attended by a decided fremitus; in other respects the left lung seemed to be healthy. The heart-sounds were very weak.

At 3 P.M., about two hours after the above examination was made, he took advantage of the temporary absence of his attendant to get out of bed and walk to the water-closet, where he was found dead a few moments afterwards.

At the post-mortem examination, which was made five hours after death, rigor mortis was well marked. On opening the thorax, the middle and lower lobes of the right lung were observed to be bound to the walls of the chest by firm adhesions; the upper lobe was free, the pulmonary and costal pleuræ being separated by a layer of serous liquid, which, when carefully removed, measured one ounce. The upper lobe was congested; the lower and middle lobes were completely hepatized, and in the upper posterior portion of the former there was a large sac, about three inches in diameter, which contained nearly a pint of thick, greenish-black, excessively fetid fluid, mingled with shreds of broken-down

lung-tissue. The walls of this sac were formed by the thickened pulmonary pleura externally, and by the decomposing and œdematous lung-tissue internally. Incisions made in the hepatized portions of the lung gave exit to a thick, greenish-black ichor, having a very offensive and slightly alliaceous odor. The lung weighed six pounds. There was nothing abnormal in the left lung, except some congestion of the lower lobe.

The pericardium was healthy; the heart was normal in size, and there was no valvular lesion, but there was a large, firm, ante-mortem clot occupying the right ventricle and auricle and extending into the pulmonary artery.

When the abdominal cavity was laid open, the liver was found to reach three and a quarter inches below the right costal border. The organ was enlarged and fatty, and weighed six and a quarter pounds.

The kidneys were somewhat fatty.

The other abdominal organs were free from disease, and there was no fluid in the peritoneal cavity.

Remarks.—This case is interesting not only as an example of a rare condition,—viz., pneumonia culminating in diffuse gangrene,—but also from the fact that during the latter part of the attack the physical signs resembled those observed in pleurisy with effusion. The change in the line of flatness over the anterior and lateral surfaces of the chest when the position was altered can hardly be explained by alterations in the level of the small amount of fluid situated over the upper lobe. But, even supposing this to have been so, it could have had nothing whatever to do with the development of râles, the increased respiratory murmur, and augmented vocal resonance and fremitus noticed over the posterior portion of the lower lobe when the patient was placed on his face. Bearing in mind the post-mortem appearances, a more rational explanation seems to be that the fluid which was contained in the sac, as well as that which infiltrated the whole of the middle and lower lobes, was affected by gravity, and, being displaced by changes in the position of the body, allowed the small portions of these lobes still permeable to air to approach nearer the chest-wall.

TRANSLATIONS.

THE PRACTICAL VALUE OF THE ENDOSCOPE IN DISEASES OF THE URETHRA (Dr. J. Grünfeld: *Wiener Med. Presse*, No. 26, 1875).—In the treatment of chronic gonorrhœa when but small portions of the urethra are affected, the use of the endoscope is often of great assistance not only in carrying out the treatment but also in making an accurate diagnosis. If there is a well-marked infiltration, the diseased parts may be treated by the application of a diluted solution of iodine, applied by introducing a brush through the tube of the instrument. By this treatment the condition of the mucous membrane is much changed, and only a thickening remains, which can be benefited by cauterization with a finely-pointed crayon of nitrate of silver or sulphate of copper. This cauterization of the mucous membrane is said to give rise to but slight pain.

In other cases the gleet is due to a papillomatous growth of the mucous membrane, which, after its situation is accurately established, can be removed by means of forceps.

A case of this kind was treated by Dr. G. two years ago; numerous ones of a similar character have since been met with by him. The endoscope is also of value in the treatment of stricture the entrance to which cannot be found by the use of bougies of small calibre, for by its use the orifice can be discovered and a course of treatment instituted.

W. A.

A CASE OF FLOATING KIDNEY (*Bull. Gén. de Thérap.*, July 30, 1875).—M. G. Cabanellas reports the case of a man, æt. 36, who suffered from severe pain in the right lumbar region, where it was easy to discover a small rounded tumor, which was painful on pressure. He had had this trouble for many years. On consultation it was decided that the case was one of luxation of the right kidney without any organic disease.

The patient also suffered from obstinate constipation, so that he had an evacuation but once in five or six days, and then only by efforts which he compared to an *accouchement*. He was advised never to attempt to empty his bowels without having first taken a continuous injection of warm water, keeping it up for a half-hour or more. He followed this advice faithfully, and, as his constipation disappeared, the pain and swelling also vanished, and he regained excellent health.

J. W. W.

HEMORRHAGE IN A CASE OF EMPYEMA ARRESTED BY PLUGGING THE THORACIC CAVITY (*Bull. Gén. de Thérap.*, July 30, 1875).—In a case of empyema which was being treated by drainage, hemorrhage from the opening in the chest supervened, and resisted all the ordinary methods of treatment. In order to assure himself of the exact origin of the hemorrhage, M. Letiévant removed a large portion of the intercostal space, but, this opening being insufficient to permit of a complete examination of the pleural cavity, he resected four centimetres of the two ribs parallel to his first incision. He then plugged the thorax and succeeded in arresting the hemorrhage. The patient recovered. The reporter justly asks why he resected portions of two healthy ribs when the intercostal opening would have sufficed for the operation of plugging.

J. W. W.

THE CHANGES IN THE BRAIN IN CHOREA MINOR (Dr. Julius Elischer: *Virchow's Archiv*, lxi. 1875).—From the examinations which he has made, Dr. Elischer concludes that the original causes of chorea cannot be referred to a single organ. The changes found in various organs which have been examined, including the peripheral nerve-trunks, spinal cord, and central ganglia of the brain, show that the advance of the disease is not confined to one locality. They show also that the pathological evidences by which it is characterized depend upon irritative processes. This latter view is sustained by the increase of the nuclei in the connective tissue of the peripheral nerve-trunks and along the vessels of the cord, and in one case, of which he made a most detailed examination, by the thickening and chalky deposits in the external tunic of the vessels of the thalami and corpora striata.

In these results of irritative processes retrograde metamorphosis takes place, and thus the results which attract the most attention in the blood-vessel system are reached. From all this he thinks that these changes (granting that they are really characteristic of chorea) result from an irritant, the influence of which is diffused over all the nervous system, but which acts more powerfully at some points than at others.

W. A.

ON AN ANOMALOUS CANAL FOR A DEEP TEMPORAL ARTERY SPRINGING FROM THE MIDDLE MENINGEAL ARTERY WITHIN THE SKULL (Dr. Gruber: *Virchow's Archiv*, B. lxi. 1875).—Twenty-two years ago Dr. Gruber called attention to an anomaly of the origin of a deep temporal artery from the meningeal media during its course within the skull, and since that time he has been looking for it, but unsuccessfully. He has, however, found the canal several times in the temporal bones of macerated skulls. In an examination of about four thousand skulls the anomaly was met with twenty-five times: six times upon both sides, eight times upon the right, and eleven times upon the left

side. The object of the canal is to permit the escape from the skull of a deep temporal artery which originates from the middle meningeal, and after its escape from the bony canal becomes a supernumerary temporal artery.

W. A.

FRACTURE OF THE LARYNX.—Chailloux (*Thèse de Paris*, 1874) examines from a surgical-forensic standpoint those unusual cases of fracture of the larynx which are caused by strangling and hanging. The thesis, however, has nothing essentially new upon the subject, so that, although containing notes of various scattered cases, and, therefore, convenient for reference to those conversant only with French, it is inferior to the work of Gurlt on Fractures.—*Centralblatt f. Chirurgie*, No. 25, 1875.

X.

METHOD OF OPERATING IN ANAL FISTULA.—M. Jules Felix, of Brussels, employs a ligature of stout English silk, one end of which is passed through the fistula and back through the anal opening. The ligature is then moved backward and forward with a see-saw motion, cutting its way rapidly through the intervening tissues until a complete section is made, as with the *écraseur*, without the loss of a drop of blood.—*Le Mouvement Médical*, No. 28, 1875.

X.

THERAPEUTIC NOTES.

ANTI-CATARRHAL PILLS.—

R Gum. ammoniac., gr. xxx;
Ammonii carbonat., gr. xv;
Ipecac. pulv., gr. iii;
Morphiæ muriat., gr. iss;
Mucilaginis, q. s.—M.

Ft. in pil. no. x. Coat with balsam of tolu dissolved in chloroform. Take one pill morning and evening in chronic bronchitis.

DRESSING FOR ULCERS.—

R Olei cadini, ʒss ad ʒi;
Pulv. calcii sulphat., ʒvj.—M.

To be thinly spread on dressings for ulcers, and renewed three, four, five, or six times daily, taking care to cleanse the ulcers after the dressing has been removed. Of especial value in the treatment of profuse and fetid suppuration.

TREATMENT OF LEAD-COLIC BY CHLOROFORM.—Chloroform has lately been used in lead-colic, both externally and internally (by inhalation), with advantage. Dr. Barduzzi has employed the following formula with success in one case which had resisted other forms of treatment.

R Chloroformi, ʒi;
Syr. acaciæ, ʒii ʒvii;
Aq. destillat., ad fʒvj.—M.

This potion is administered in two parts, with a quarter of an hour interval.

In Dr. B.'s case this potion was given three times in thirty-six hours, with the effect of relieving the patient greatly.

Inunctions with a chloroform embrocation were at the same time employed on the abdomen.

IN SYPHILIS.—

R Hydrarg. bichlor., gr. i;
Opii, gr. ii;
Pulv. glycyrrhizæ,
Ext. gentian., aa ʒss.—M.

Ft. in pil. no. 16. One to be taken morning and evening after eating.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

UTOPIA.

THERE can be no doubt at the present day that all individuals are not equally responsible for their offences against law or morality. Hereditary predisposition, the presence or absence of the "criminal neurosis," the influence of education and surroundings, are all powerful factors in the production or prevention of crime; and the time will come, we hope, when the circumstances determining these conditions shall have been so carefully studied and recorded as to permit of a natural and rational classification of criminals into various divisions, ranging from the thoroughly responsible to the totally irresponsible and insane. When this is done accurately and scientifically, when it shall be possible to distinguish with but little risk of error between the poor wretch who is blindly impelled to his deeds of lawlessness and outrage by an influence generated, perhaps, before he was conceived, and the cold-blooded, methodical villain, who, knowing the right, deliberately seeks the wrong, it will also be possible to apportion to each his proper meed of punishment, and restrain, confine, or execute with some regard to the relation which should obtain between the punitive measure and its object.

We can look forward then to the recognition by legislators of the fact that "moral and physical disease may have a common origin, and consequently common laws of cure," and to the elucidation by physicians of those complex organic processes which, according to Maudsley, render lunatics and

criminals "as much manufactured articles as are steam-engines and calico-printing machines." We can then hope to have framed not only retributive but also prophylactic and curative laws, and to see the medical expert a recognized authority in every tribunal of justice and a guide and counsellor in its judgments. We shall understand or abolish such apparent discrepancies as on the one hand the conviction and execution of a mere child for causeless and objectless murder, and on the other the exoneration on the ground of "insanity" of the "spiritual adviser" of a pious congregation from the undenied charges of indecent assault and attempt to commit rape. We shall know why lawyers, when they sin, peculate, why clergymen, of late years, fall victims to the temptations of the flesh,* and why physicians—never wander from the path of rectitude.

While waiting, however, for the accumulation and development of this knowledge, if we are evolutionists we can solace ourselves with the Spencerian belief that whereas "man's primitive circumstances required that he should sacrifice the welfare of other beings to his own, his present circumstances require that he should not do so." His powers of restraint and self-control, like his other faculties, increasing with use, it follows that "progressive morality is a necessary consequence of the evolution of life," and that, if no mental or moral cataclysm occur, time alone will bring about a condition of perfection.

"Roll swifly round, ye wheels of Time,
And bring the blessed day."

LEADING ARTICLES.

THE INFLUENCE OF THE LOWER ORGANISMS IN THE PRODUCTION OF INFECTIOUS AND CONTAGIOUS DISEASES.

I.

MODERN, and especially recent, researches into the connection between infection and contagion, on the one hand, and the development of microscopic organisms, on the other, possess the deepest interest, not only for the pathologist but also for the practical physician. It is only by examination into the cause of disease-action that rational methods of prevention and cure can be fairly hoped for; and, although the work of the post-mortem room and the laboratory may seem to have but a remote bearing upon the clinical study of disease in many cases, yet it is by this in great measure that the physician of the future is to win his greatest triumphs.

* "When it was asked Ovid why Ægystus became an adulterer, he made no answer but this: 'Because he was idle.'"—RABELAIS.

Accepting this view, it is not necessary to apologize for offering in the pages of a journal intended for the practical physician a review of recent progress in our knowledge of certain points connected with the etiology of the infectious and contagious diseases.

Before presenting the analysis of these investigations which it is proposed to give, it seems advisable to allude to the subject of contagion and infection in general, and also to give some account of the organisms themselves which are now so generally believed to play a part in the production of the zymotic affections.

Two hypotheses in relation to the origin of the infectious and contagious diseases may be regarded as at present dominant, to the exclusion of all others. The first of these regards the poisons of infectious diseases as *chemical processes*. "A burning shaving," says Liebermeister, in elucidating this subject,* "can set fire to a house and an entire city. The chemical process of burning multiplies itself ad infinitum, so long as combustible material and oxygen are present under favoring circumstances."

The second hypothesis ascribes the disease-process to the *multiplication of living organisms*.

Among chemical actions it is chiefly the processes of fermentation and decomposition which, by their capacity for extension by means of the smallest quantity of matter, show the most striking analogy to the contagious diseases. The name "zymotic" diseases (from ζυμοῦν, to ferment), so generally adopted some years ago for this class of affections, shows the notion prevalent of their nature. "But the only ferment processes which can be taken into consideration are all associated with the presence and multiplication of low organisms. Accordingly, the existence of disease-poisons which have the capacity for infinite extension necessarily gives rise to the theory of a *contagium vivum*, and the conclusion can only escape those who satisfy themselves with the simple facts, and do not care to build up any theoretical idea on the origin of the diseases in question" (Liebermeister, *loc. cit.*).

It is certainly a fact that the hypothesis of living organisms as the origin of infectious disease has a high degree of plausibility to begin with, and though the evidence in its favor may be as yet comparatively meagre, conflicting in some details, and in many respects contradictory, yet it is constantly increasing by the labors of a host of conscientious and able workers; and the hypothesis itself bids fair to explain much in the action of disease which has hitherto been wrapped in obscurity.

The organisms to which are attributed the causation of disease belong to the lowest class of the vegetable kingdom. So minute are they, so little do they offer in the way of organization, and such formidable difficulties attend their investigation, that it is not surprising that their very nature, whether animal or vegetable, should long have been a matter of dispute.

Even at present, the whole subject of these lower organisms is beset with difficulties; not only their mode of action, but even their botanical nature and classification, continues to be the subject of active controversy.

Want of space, and the desire to avoid clogging with confusing detail an article intended rather for the general medical reader than for the specialist, prevent us going deeply into the subject of the classification and arrangement of the various organisms believed to be concerned in the origin and propagation of disease. Fortunately, we have at hand a very excellent article by Dr. L. A. Stimson, of New York,† from which we shall abstract such portions as seem necessary to elucidate our subject, and to which we can with pleasure refer any one desiring a clear and succinct *résumé* of the various names and classifications of the organisms under consideration which are at present in use, or which have been proposed.

The organisms of which we have been speaking are those commonly known under the general designation of bacteria or vibriones.

The terms *bacterium* and *vibrio* are well known, though their use is not infrequently coupled with a very imperfect idea of the organisms themselves. Briefly, it may be said that the term bacteria is, in France and Germany, ordinarily associated with microscopical bodies, round, oval, or rod-like, and jointed, found especially in putrefying vegetable and animal infusions. In England these organisms were formerly called vibriones, but this term is giving way to that of bacteria.

Used in a narrower sense, bacteria denotes stiff, rod-like bodies, single or jointed, motionless or endowed with an oscillating movement in place, while vibrio is applied to those that have an undulating, sinuous motion and move rapidly across the field of the microscope. These organisms are now almost universally believed to be of vegetable origin.

It would be impossible to give here an account of the various classifications proposed and adopted by different writers, but we shall endeavor to give some idea of those now most generally in use, in order that the terms used may be more intelligible. We extract from Dr. Stimson's article the classifications of Cohn and Billroth. Cohn, he says, makes the following divisions:

"BACTERIA.—Tribus I., *Sphærobacteria* (Ball bacteria): Variety 1, *Micrococcus*.

"Tribus II., *Microbacteria* (Rod bacteria): Variety 2, *Bacterium*, subdivided into *B. termo* and *B. lineola*.

"Tribus III., *Desmobacteria* (Thread bacteria): Variety 3, *Bacillus*; Variety 4, *Vibrio*.

"Tribus IV., *Spirobacteria* (Spiral bacteria): Variety 5, *Spirillum* (of Ehrenberg); Variety 6, *Spirochæte* (of Ehrenberg).

"Billroth makes no claim to a complete botanical classification. He deals principally with the forms which

* Ziemssen's *Cyclopedia of the Practice of Medicine*, Am. ed., vol. i. p. 10.

† Bacteria and their Influence upon the Origin and Development of Septic Complications of Wounds.—*New York Medical Journal*, August, 1875.

are found in animal infusions, and in the body during disease or after death. But, while he does not attempt to describe all the varieties, he gives a complete history of those which he has observed, tracing the whole cycle of their development, and showing so close a genetic relationship between them that it seems probable future investigation will show the others to be included in it. He considers all the forms combinations of spherical and cylindrical bodies, representing only different periods of development. His nomenclature and classification being based upon this opinion, he groups all under the name *coccobacteria* (κόκκος, a berry, and βακτηρία, a little rod), and gives to the different forms names which are compounds of these two with words denoting the number, size, and arrangement of the component parts; micro-, meso-, and mega-, signifying small, medium, and large; mono- and diplo-, single and double; strepto-, in chains; glia- (γλία, glue), in groups; asco-, in bags; and petalo-, in plates. This classification is simple and clear, for each name has the great advantage of describing accurately the form to which it is applied."

There are two terms met with constantly in recent pathological works which are not included here; these are *bacteridia* and *micrococcus* or *microzyma*. The former was applied by Davaine to long immovable forms of bacteria found by him in the blood of animals affected with anthrax; they belong in variety 3, bacillus of Cohn, while the latter is applied to the innumerable round or oval forms found in the tissues, secretions, or blood of persons suffering from septic diseases, and in putrefying liquids.

Bacteria are cells lacking chlorophyl, of spherical, oblong, or cylindrical form, which multiply by scission and vegetate either simply or in groups. Billroth and Cohn maintain that there is no genetic relationship between bacteria and any of the yeast-plants. Billroth, indeed, says that whenever any luxuriant yeast vegetation except *oidium lactis* is growing rapidly, the elements of *coccobacteria* do not flourish.

The germinative spores of bacteria, first described by Billroth under the name *dauersporen*, are glistening dark-bordered globules, which develop in their interior masses of *coccus*, which are set free by the bursting of the envelope, but are retained in contact with it sometimes by the presence of a mucous or gelatinous substance called *glia*. The *coccus* may multiply by lengthening and scission, or they may lengthen into bacteria, and gradually free themselves from the enveloping *glia* by their own active motions. This division or scission ordinarily occurs in one direction only (when it takes place at right angles also the well-known *sarcinia* forms are the result); the two pieces are held together by the *glia*, and each divides again and again. In this way rosary or chain-like forms result, the "streptococcus" of authors. The bacteria may often lengthen and divide transversely, forming the well-known jointed bacteria. All these developments, Dr. Stimson says, may be observed by any microscopist, and he has himself followed them frequently. The division or scission

may take place so rapidly that each bacterium forms a streptococcus, and the result is a gelatinous mass filled with *coccus*, and forming what is known as *zoogloea*. If the *glia* is very tenacious it may form a sort of membrane about the mass, known as *ascococcus* (ἄσκος, a bag), which sometimes shows amœboid movements. After a time this membrane bursts, the *coccus* escape, and the empty husk is found at the bottom of the vessel.

The final fate of bacteria may be either to leave the enclosing husk as finely granular sterile mucus, to break up rapidly into *micrococcus* within the husk, expanding it considerably, and forming a variety of *ascococcus*, or to contract into one or more glistening, dark-outlined bodies which are the germinative spores (*dauersporen*) above alluded to, and which, after a certain period of repose, may again germinate. The vitality of the latter is not destroyed by freezing, boiling-heat, or by drying, and these spores carried about in the air are undoubtedly the principal agents in the production of *coccobacteria*. Billroth had some which germinated after having been kept eight years. This is the only form which withstands drying; the *coccus* and bacteria do not.

The isolated *coccus* possess only a motion which cannot be distinguished from the ordinary molecular movement of very small, inert portions of matter, the so-called Brownian movement. When, however, they remain united in chains (*streptococcus*) they appear to have a sinuous serpent-like movement, which carries them sometimes with great rapidity across the field of the microscope. Progression is made in either direction, and the large spiral ones often move forward and backward across the field with almost the regularity of a pendulum. Occasionally one end remains attached to a larger object while the other vibrates slowly to and fro, or the whole revolves rapidly about its long axis without change of place. The larger *microbacteria* chains are usually motionless, and the isolated bacteria show only an oscillatory motion without change of place. The motions seem to be dependent upon the fluidity of the medium and the presence of oxygen.

For their nourishment bacteria need carbon, nitrogen, and certain of the elements of the ashes of ordinary yeast. Bacteria resemble green plants in this, that they assimilate the nitrogen contained in their cells in the form of ammonia compounds, which animals cannot do; on the other hand they differ from green plants and resemble animals in this, that they cannot take carbon from carbonic acid, but only from the organic compounds of carbon, especially the hydrocarbons and their derivatives.

Bacteria are not parasites; they do not live upon the materials intended for the nourishment of the tissues in which they are found, and cause the death of these tissues by starvation, but they probably live upon some of the elements of the substance itself, by the withdrawal of which new chemical combinations of the others are caused. Putrefaction is a correlative phenomenon of life, because it occurs only when a microscopical vege-

table organism nourishes itself and multiplies at the expense of a part of the putrescible substance. This organism is the bacterium, at least in some of its forms or varieties. Billroth believes its form known as *B. termo* to be the only one which excites putridity. Cohn says that they multiply as long as putridity lasts, and disappear so soon as it ceases. He is convinced that *B. termo* is the ferment of putrefaction, as yeast is the ferment of alcoholic fermentation, and that no putrefaction can begin without it or progress without its multiplication.

Bacteria exist in one form or another in all water, most animal tissues, and in the air. In the latter they are found only in the form of germinative spores, the other forms not being able to support the absence of moisture. Their presence in the healthy living body has been recently demonstrated beyond cavil by Billroth and Tiegel.

The spores which float in the air or are deposited upon exposed surfaces remain inert and innocuous until the conditions necessary to their development are supplied, among which moisture is the chief. It is generally agreed that these spores stand very low degrees of temperature (even 0° Fahr.) without losing their vitality. As regards the higher temperatures, observers differ, Cohn maintaining that a temperature of 140° Fahr. is sufficient to kill the spores, while Billroth, on the other hand, says they can stand 212° Fahr.

To recapitulate: Bacteria are microscopical vegetable organisms of two main varieties: 1. Round or oval cells 0.0005–0.0010 mm. in diameter, single or arranged in lines or groups (sphaerobacteria, micrococcus, Cohn; micrococcus, streptococcus, Billroth). 2. Cylindrical cells 0.002–0.003 mm. long, single, or arranged in lines (bacteria of both authors). There is no genetic relationship between them and ordinary mould or fungus. They are found in the air, water, and most animal and vegetable tissues. They are saprophytes,* not parasites, and are unable in themselves to cause any of the infectious diseases.

Having thus briefly sketched the current theories of contagion and infection, and having endeavored to give such an account of the organisms believed to be connected with disease-processes as to convey an intelligible idea of their general nature, we are prepared to examine the results of investigation as regards the influence of these organisms upon the production of the various infectious and contagious diseases. This examination, however, must be postponed to a future number of this journal.

SYPHILIS (*Archives of Dermatology*, July, 1875).—Stefanini reports the case of a young girl, who, having severe ulceration of the throat and velum, and iridocyclitis, which were unsuccessfully treated by the usual means, was rapidly cured by the injection of half a grain of calomel suspended in glycerin. Though no history of syphilis was obtainable, the author thinks the results of treatment warrant the diagnosis of that disease.

* Saprophyte, *σάπρως*, putrid, and *φύτον*, plant.

CORRESPONDENCE.

WASHINGTON, August, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES: SOME two years ago a prominent druggist of this city called my attention to the "Damiana" plant claiming for it powerful aphrodisiacal properties. From his testimony and other certified evidence, I was tempted to give it a trial in that class of diseases generally termed "female weakness." My experience in these cases was quite satisfactory. In my hands it seemed to possess decided tonic properties, and when administered in combination with some of the ferruginous compounds, either the iodide or citrate, —giving of the "damiana" ʒij at a dose,—its beneficial effects were speedy and decided. With regard to its aphrodisiac virtues, my experience is as follows:

Case I.—In the early part of May last I was applied to by a negro woman aged 24, married four years. Three years before, she had been troubled with some uterine difficulty, the result of which was entire suppression of the menses; never had seen anything since. Her belief was that she had been "conjured" by some influence. She had never been pregnant, which was a source of unhappiness to both herself and husband. Her general health was good, save a slight leucorrhœa and pain periodically in the top of the head. I prescribed a general tonic and the "damiana" in ʒiij doses three times a day. Three months later her husband called at my office (they lived some forty miles in the country) to report progress; said his wife had "done had her sickness twice, and got all the 'signs' of being in that way," and her leucorrhœa had also disappeared.

Case II.—A young man aged 32 had lost his virility through excess and dissipation; all sexual desire entirely wanting; had been in that condition for some eight months. Came to me for treatment about the 12th of June last. I gave the ext. (fld.) damiana in ʒij doses three times a day; in about two weeks he reported decided improvement; continued treatment for about two months, and then he reported his manly functions entirely restored.

E. A. DUNCAN, M.D.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

JUNE 2, 1875.

Case of encysted dropsy of the peritoneum, in which suppuration had occurred and abdominal section was performed, with recovery.

D. R. J. EWING MEARS read a paper describing the case of a lady, æt. 40, who had had six children, the youngest being 7 years of age. She dated the beginning of her illness from the last confinement, in which she was informed that the placenta was adherent, and she suffered severely from post-partum hemorrhage.

About three months after confinement, she noticed a small swelling in the right inguinal region; it was

freely movable, so that it could be pushed about by the finger. For the period of one year the swelling remained quiescent, then it began to enlarge until it attained the size of a large goose-egg.

On making an examination, Dr. Mears found the patient much emaciated and debilitated. The heart's action was feeble and intermittent. Orthopnoea was present. The expression of the face was haggard, and betokened much suffering. The pain was constant and of the most exhausting character; the patient expressed herself as suffering from a "great burden." There was no oedema. The abdomen was enlarged to the size of a full-term pregnancy. The surface was smooth and regular, and the veins were not enlarged. The abdominal walls were not very tense, but they could not be lifted from the tumor. On percussion, resonance was elicited over the entire surface as far below as the line of the umbilicus; below this line dulness was marked on both sides, especially on the right. Fluctuation was not very distinct, but still was perceptible, giving evidence of imprisoned fluid. Change of position did not affect the percussion-sounds.

A vaginal examination showed that the uterus was in a condition of marked anteversion and fixed in its position. Pressure applied to the tumor through the abdominal walls did not move the uterus. Owing to its fixed position, it was impossible to introduce the sound to a greater depth than one inch. The finger in the vagina could detect a tumor in the pelvic cavity.

The diagnosis could not be made exactly, but an operation of exploration was advised and was consented to, and performed as follows. The abdominal cavity was opened by making an incision two inches in length in the linea alba, midway between the umbilicus and the pubes. On introducing the finger, he found adhesions between the tumor and the parietes of the abdomen, which were separated with some difficulty. He enlarged the incision to four inches, in order to obtain a more extended view of the tumor. Through this opening he introduced his hand and separated the parietal adhesions, which were general. On making an examination after the separation, he found that the anterior wall of the tumor was in great part above, formed by the great omentum, covered by a dense layer of lymph, and firmly adherent to the subjacent intestines; its lower edge was rounded and was fastened to the intestines below, forming a smooth junction with them. Below the border of the omentum the intestines were firmly adherent, and formed the remaining portion of the anterior wall.

Seeking for the line of attachment between the intestines, he made an opening with his finger, and gave exit in this way to over two gallons of fibrinous pus. The adhesions between the intestines were freely broken up, and free exit thus given to the contents. Owing to the very firm adhesions between the thickened omentum and the intestines which lay beneath, it was found impossible to separate them. The effort made to accomplish this detached at one point the peritoneal layer of the bowel. The omentum was extremely vascular, and free hemorrhage occurred on section of it. At one point Monsel's solution and the hot iron failed to control the bleeding, which yielded finally to the application of a carbolyzed silk ligature, the ends of which were cut off close, when the ligatured portion was returned to the cavity of the abdomen. The parietal peritoneum could not be recognized as such, the entire inner surface of the abdominal wall being covered by a layer of lymph, measuring at least one-third of an inch in thickness.

The intestines were fastened together by dense bands of lymph, and their surfaces were also covered by dense layers. On making a section of the omentum, the normal fat tissue was found surrounded by layers of lymph one-half of an inch in thickness.

The abdominal cavity was cleansed by soft sponges, and the wound closed by five iron-wire sutures, an opening being left at the lower part for the purpose of drainage. The dressing was completed by the application of a compress of cotton-wool and bandage, and the patient was placed in bed, and one-third of a grain of morphia given hypodermically. The pulse was 96, and feeble; the skin was cool; vomiting occurred. Towards evening, reaction was fully established, the pulse rising to 118 and the skin becoming hot. The catheter was employed to relieve the bladder, the color and quantity of the urine being normal. A diet of barley-water was ordered. Morphia in one-third-grain doses was given hypodermically as required.

The after-treatment consisted chiefly in supporting measures, the administration of quinia and iron, and careful attention to the wound and syringing out the cavity with a weak solution of carbolic acid.

When the character of the cyst is considered, the difficulties of the diagnosis in this case can be fully appreciated. The history distinctly pointed to the existence of a tumor originating in the right inguinal region, at first quite small and freely movable under the finger. The physical signs showed unmistakably the presence of a tumor containing fluid. The absence of resonance on percussion was caused by the thickened overlying omentum, and the thick purulent fluid in the cyst gave rise to quite well-marked fluctuation. Inferiorly, the walls of the cyst were so thickened by plastic deposits as to prevent the determination of its true nature by vaginal examination. The decline in the health of the patient during the last year might have been accounted for by suppuration in an ovarian cyst. It was no doubt caused by suppuration in the false cyst.

The question as to the proper treatment to be adopted in these cases is one of importance. The question relates rather to the method in which the proper treatment should be carried out, as it is impossible to conceive of any treatment leading to a successful result other than that which should promptly give exit to the purulent fluid and prevent its accumulation. This may be accomplished by tapping, or by incision, as practised in this case. In those forms of encysted dropsy in which the fluid lies in front of the intestines, evacuation with the trocar can be obtained without danger. Where the cyst lies behind the intestines, tapping through the abdominal walls would involve the great danger of puncturing the intestines which compose in part the walls of the cyst.

After the reading of the preceding paper, Dr. WILLIAM PEPPER said,—

Cases which may strictly be called encysted dropsy of the abdomen, though rare, are occasionally met with, either as a result of localized subacute peritonitis, or from the pseudo-cystic transformation undergone by large intra-peritoneal clots of blood. In such cases the seat of the fluid collection varies much. It may be within the fold of the great omentum, or in any segment of the abdominal cavity, being bounded partly by the surface of the adjacent viscera, and partly by the new-formed wall of lymph or fibrin. In several of the cases which he has observed, the cause of the attack has been a traumatic one.

ANEURISM OF THE INNOMINATE (*The Lancet*, July 31, 1875).—Mr. Frederick Ensor reports a case of innominate aneurism, in which he ligated the left common carotid at its bifurcation, the patient surviving for sixty-five days. He believes that chronic alcoholism and syphilis are the two most important causes in bringing about that condition of the artery which results in aneurism.

GLEANINGS FROM OUR EXCHANGES.

COMMON COLDS (*The Practitioner*, July, 1875).—Dr. J. Milner Fothergill briefly considers the causes and the treatment of common colds. Whenever and wherever they are met, they are the consequence of a chill, either to the general surface or to a portion of it. Ordinarily the body temperature is maintained by the equilibrium existing between the internal heat-producing area and the external heat-losing area, or the surface. When excessive heat-loss is not met by increased heat-production, a chill or lowering of the body temperature is the consequence; or if heat-production has been great, the cutaneous vessels are dilated, and if the surface be suddenly exposed to cold these dilated vessels are apt to be paralyzed instead of incited to contraction, and then heat is rapidly lost from the mass of warm blood in the cutaneous vessels. The catching cold or the escape from doing so depends upon the state of the vessels of the surface and their capacity to contract or the opposite. Consequently we can see that catching cold or escaping from it under apparently identical circumstances depends upon a condition far removed from either vision or sensation. Where heat-loss is met by heat-production at the time, no unpleasant consequences result; but where the heat-regulating processes are delayed, the loss of heat and fall of temperature at the time are followed by an excessive heat-production, constituting a pyretic condition which in its simplest form is a cold.

Obviously, the indications for treatment are to restore the balance between the heat-producing and heat-losing areas; and in order to do so we resort to such measures as shall increase the amount of blood in the outer area, and so diminish the amount in the internal area; that is, to increase heat-loss and lessen heat-production. We consequently use hot fluids, nauseant diaphoretics, warm beds, opium, and quinine, the latter usually after the action of the skin has been re-established.

DIET OF INFANTS AFFECTED WITH ACUTE INTES-TINAL CATARRH (*The Boston Medical and Surgical Journal*, August 12, 1875).—Dr. R. Demme, after an extended experience, recommends as the most appropriate food for infants affected with gastric or intestinal catarrh the following diet: Add from a quarter of a pound to a pound of beef, freed of fat, to two quarts of cold water, and let this stand from half an hour to an hour; then boil down to one pint; after cooling, skim off fat from the top, and filter. At each time of using (every two or three hours) without being warmed, this is to be mixed with freshly-prepared rice- or barley-water. In the intervals of meals the latter should be given alone, best without sugar, to relieve the thirst. If this food is refused, he gives a drink made with the white of an egg, using according to age from one to three eggs in half a pint to a pint of water which has been previously boiled and cooled down to 98°. If the child's strength begins to fail, brandy in doses of from five to thirty drops is added to the rice- or barley-water, from three to five times a day. With older children a mixture of milk with the rice-water or barley-water may be tried.

A PATHOGNOMONIC SIGN OF THE MORIBUND CON-DITION (*The Practitioner*, July, 1875).—Dr. John Shradly maintains that the earliest and therefore the most valuable symptom of approaching death is the up-and-down movement of the trachea; that the inferior laryngeal nerve, owing to a partial paralysis or impairment of its function, is concerned in the production of this phenomenon, and sounds the first note of alarm that the medulla oblongata is invaded. This tracheal symptom is particularly prominent in fatal cases of uræmic

convulsions, opium-poisoning, apoplexy, and delirium tremens; the air then ceases to stimulate the glottis, the respiratory movements are impaired, and the lungs can no longer decarbonize the blood. In pneumonia, Dr. Shradly thinks this symptom is of special value, anticipating, as it does, alarming changes in pulse and temperature, whilst in phthisis he has known it to be a precursor of death three weeks in advance. Its presence or absence in membranous croup should, in his opinion, be an important element in the prognosis of a given case of tracheotomy.

TREATMENT OF CHOLERA (*The Practitioner*, July, 1875).—Surgeon A. R. Hall, presuming the morbid state against which we have to contend in the collapse of cholera to be one of asphyxia caused by spasms of involuntary muscular fibres, due to a condition of hyperactivity of the sympathetic nervous system, asserts that the logical inference distinctly points to the exhibition of a remedy calculated to neutralize this condition. Such remedies are to be found in a class of agents which directly depress the activity of the muscular fibres of the circulatory apparatus. As medicines given by the mouth are generally immediately rejected, hypodermic injection is the best method of administering the drug used, which should be a pure sedative, chloral hydrate being the most efficient. It should be given in a solution of the strength of one part of the chloral to ten of water. Mr. Hall mentions nineteen cases treated on this plan by an Indian surgeon, seventeen of which recovered.

CONDITION OF THE BLOOD-VESSELS IN THE BRAIN OF THE INSANE (*The Dublin Journal of Medical Science*, June, 1875).—Dr. Atkins, having reviewed the morbid changes found in the cerebral vessels of the insane, portrays as follows the clinical effects which accompany and are caused by these changes. Starting with the condition of dilatation, we can at once see that, should active arterial hyperæmia be the initial cause, over-nutrition of the brain-cells will take place, exaltation of function will follow, the ideas will flow free and fast, fancy will be excited, imagination aroused, motor impulses become uncontrolled, and acute mania will be the result. Should this active hyperæmia change to passive congestion and stasis occur, a lowering of nutrition takes place, depression follows exaltation, the ideas become slow and shallow, indifference succeeds excitement, emotion becomes impeded and sluggish, and secondary dementia gradually supervenes. Should stasis persist, organic changes in the cell-elements ensue, blocking up of the outlets for waste products follows, resulting in the infiltration of these products into the tissues, apathy succeeds indifference, consciousness and volition are gradually abolished, the calls of nature neglected, and the unfortunate sufferer sinks into a state of hopeless fatuity. Years may elapse between these different stages, or the progress may be in the reverse direction,—towards health and recovery.

SLEEPLESSNESS (*The Lancet*, July 31, 1875).—Dr. George Johnson, in a lecture on the effects of overwork and mental anxiety, alludes to the sleeplessness and anorexia which are almost invariably caused by these conditions. He says it is not always easy to determine whether the loss of appetite is a direct result of the nervous excitement, or whether the restlessness is a result of the diminished supply of nutriment to the brain; but that it is probable that the two conditions have a mutual influence upon each other. In cases resulting from overwork, he has observed in numberless instances that a man who has been more or less restless for many months, and who, during that time, has had a loathing for food, after taking a grain of opium at bedtime for a few nights sleeps soundly for several

hours, and then wakes with an appetite. This tends to prove that in such cases the derangements of the nervous system are first in order of time and importance.

In cases of delirium tremens, the reverse is true; the delirium, wakefulness, and other evidences of nervous disorder are directly due to malnutrition of the brain, and, in spite of all treatment by drugs, will continue until a certain amount of nutriment has been absorbed. In these cases the substitution of narcotics for food has often been attended with rapidly fatal results. We see, then, that in delirium *a potu*, sleep follows and is favored by taking food; in cases previously nervous, the soporific effect of opium or chloral procures sleep, and then restores the appetite and assists digestion.

EXTIRPATION OF A TUMOR OF THE BLADDER (*Boston Medical and Surgical Journal*, July 8, 1875).—Dr. Carl Gussenbauer reports the case of a boy, æt. 12, who was supposed to have a vesical calculus, but who was discovered by Prof. Billroth to have a tumor of the bladder, and was operated upon by him in the following manner. After the patient was narcotized, the lateral incision for removal of stone was made. The finger introduced into the bladder showed immediately that a tumor nearly the size of the fist, with an uneven surface, projected from the posterior wall and extended towards the top of the cavity of the bladder. Owing to its size, it was found impossible to extract the tumor, with the finger, from the perineum. A supra-pubic incision was then made, without injury to the peritoneum, and to give sufficient room both recti muscles were cut across at their insertion; also a transverse incision into the bladder was made. Prof. Billroth soon came to the conclusion, after examining with the finger, that the use of the *écraseur* was not practicable or desirable, as the tumor possibly might be already adherent to the peritoneum, in which case the latter would have been so injured as to delay healing. He therefore decided to tear the tumor with his finger near its base, and to cut out the remainder from the wall of the bladder, after passing a ligature round to check bleeding. The extraction of the torn pieces of the tumor was not so easy, in spite of the large size of the incision, as would have been supposed. In dissecting out the pedicle it was necessary to turn the bladder partly inside out. It then appeared that the tumor took its origin from the muscular coat of the bladder, but had not attacked the outer coat or the peritoneum. The plan was, in case the peritoneum had been opened, to close the hole with sutures. Two arteries were tied, and the ligatures brought out through the upper incision in the bladder. The wound in the bladder was not closed, but a drainage-tube was drawn through the bladder, and brought out at the incision in the perineum. There was no subsequent difficulty, and in one month the patient was discharged, perfectly well. The tumor was found to be a well-marked, mixed tumor, principally a myo-sarcoma, but in places a myo-carcinoma.

PERIODICAL MELANCHOLIA (*The Medical Record*, August 14, 1875).—Dr. William Suflet, after careful study of numerous cases, has observed that, although repeated attacks of melancholia in the same person are not unusual, yet they are generally very few and very far apart, and if the patient does not entirely recover he passes into a permanent state of melancholia, or into some other form of insanity.

Loss of flesh invariably accompanied the attacks, and an increase in weight always followed as soon as they were over.

The attack always commences with a subacute anæmia. The general anæmia continues during the entire attack, and disappears during the interval. The skin and the mucous membranes are pale; the pulse is small and feeble; the veins, on the contrary, dilated and dis-

tended with blood. These phenomena are also quite constant and admit of no exception.

As regards the treatment of the disease itself, it is necessary to bear in mind that the psychical organ in this state is unable to produce any but painful sensations, and therefore all kinds of excitation, all impressions, even pleasant ones, have to be avoided, and the patient must be advised to keep quiet bodily and mentally. A few days' rest in bed is sometimes the most beneficial remedy. Exercise, travelling, admonition, and religious consolations only aggravate the psychical hyperæsthesia. On the contrary, everything that produces relaxation of the vaso-motor spasm, and congestion to the brain, acts beneficially. Thus, prolonged tepid baths, and, above all, opiates, though only palliatives, often make life endurable, especially in the variety of melancholia with great præcordial distress.

Other remedies which act similarly may also be tried, like inhalations of ether, chloroform, nitrite of amyl, chloral, etc.

CURE OF CYSTITIS BY DILATATION OF THE NECK OF THE BLADDER (*The Medical Record*, August 14, 1875).—Dr. Howe reports the case of a woman, æt. 35, who had for more than a year been afflicted with a chronic cystitis for which various remedies had been tried without avail. It was decided to try the effect of dilating the neck of the bladder, in order to give the organ a rest and to examine the inflamed membrane. She was placed under ether, and the urethra gradually dilated with Molesworth's dilator until it was large enough to admit a finger. The bladder was thoroughly washed out, and she was then placed in bed and given quinia in tonic doses.

She complained of soreness about the urethra, and the urine dribbled from the bladder until the fifth day after the operation, when the sphincter muscle again resumed control. From that time on, micturition was performed in a natural manner, without pain or uneasiness, and she has entirely recovered.

SYPHILIS (*The Doctor*, August 1, 1875).—Mr. Henry Lee, in a recent lecture, expressed his belief that the product of primary syphilis is inoculable artificially, so as to produce the same effects as when it was naturally acquired; that the results of secondary manifestations are inoculable, so as to produce the same results; that the secretions from mucous membranes in syphilitic patients are very often the means of communicating the disease, and may sometimes be artificially inoculated.

As to treatment, Mr. Lee said that at whatever period of the disease we find the specific adhesive form of action, whether as a primary indurated sore, or an affection of the inguinal glands, or as papular, tubercular, or scaly eruptions, he held mercury to be indicated. On the other hand, when the disease, whether primary, secondary, or tertiary, has a tendency to produce suppuration, the use of this drug requires great caution; and the same may be said where the affected parts run rapidly into ulceration, although in some of these one form of mercurial treatment is wonderfully efficacious. He pronounced mercury to be injurious where mortification takes place, whether affecting minute or larger portions of the tissues.

TRISMUS NASCENTIUM (*The Richmond and Louisville Medical Journal*, July, 1875).—Dr. Philip A. Wilhite reports fourteen cases of trismus nascentium and of trismoid, which he distinguishes as the acute and the chronic forms of the disease. The first symptom of trismus is inability to suck. This is pathognomonic of the disease. The child loses the power of seizing the nipple; and if the nipple should be forced between the jaws, it has no power of suction. The child seems to

be indescribably distressed, moans, whines, cries, is colicky, sometimes has griping passages from the bowels, is restless, uneasy, sleeps badly, has borborismus, slight spasm of one or both upper extremities, then tonic rigidity of the whole muscular system with clonic spasms, which come on at intervals, and are often excited by touch or a noise. The expression of countenance is very peculiar, and can never be forgotten when once seen. The acute form terminates fatally in two or three days, sometimes in less time; while the chronic or milder form of the disease may continue for weeks and even for months—the child slowly wasting away to a mere skeleton, and dying of what was formerly called marasmus, which is but another name for gradual starvation.

Dr. J. Marion Sims many years ago contended that this disease was not traumatic tetanus, but was caused by pressure, generally the result of an inward displacement of the occipital bone, which always existed at birth, was kept up by the dorsal decubitus, whether in the cradle or the mother's lap, and which could be removed together with the symptoms of trismus simply by adopting the lateral decubitus. Dr. Wilhite cured seven of his cases by position alone, the other seven dying without treatment. He concludes that these cases justify the conclusion that trismus nascentium is the result of mechanical causes; the predisposing causes being protracted or tedious labor, and a too well ossified state of the fetal cranial bones. The exciting cause is undue pressure on these bones, more especially the occipital; while the immediate cause is undue compression of the medulla oblongata and the nerves originating from it. The cases given are all of one general character, and all go to show that the disease is the result of pressure exerted at the base of the brain. In all of them the pressure was produced by an inward depression of the occiput, differing, however, in degree from the slightest to the greatest possible.

INTESTINAL OBSTRUCTION (*Atlanta Medical and Surgical Journal*, August, 1875).—Dr. A. B. Copeland reports a case of persistent intestinal obstruction relieved by placing the patient in an inclined position, administering large distensible enemata of warm water, and finally by injecting tartaric acid and bicarbonate of sodium and following them immediately with an injection of water.

MISCELLANY.

WE publish the following epistle as a literary curiosity, and as a specimen of some of the trials undergone by the disciples of Æsculapius. It was recently received by a respectable physician residing at Cape May, who had been called in by a lady to attend her daughter-in-law during an illness of a serious nature. He paid about twenty visits, and sent in a bill for fifty dollars. Although the family was moderately wealthy, he was met with a request to reduce the amount to thirty-five dollars, which he very properly refused to do, and subsequently placed the matter in the hands of a lawyer. The result was the receipt of the money and of the subjoined vituperative communication from the husband of his patient:

"DR. —: "

"It is well for your mummied bones that you are securely out of my reach. . . . Were it not that I wish

to spare mother's old age from worry and trouble, I would let you whistle for your money. It is an outrageous extortion, at any rate; but as you will have been paid ere this arrives, doubtless your miserly old soul will be reveling in glee, and your conscience—Heavens! has such a being a conscience? Had you decently bided your time you would have been paid next week. I got the bill only a few days since, and took steps at once to pay you in full—for I did not think the medical fraternity boasted such liberality.

"Faugh! you are hardly worth wasting a stamp upon! I once felt a show of gratitude towards you, but that is gone. No such kindly feelings can exist in the overwhelming torrent of your contemptible and insulting folly. You are wanting the essence and characteristics of a gentleman, and I, too, have been compelled to step down to your level, in order to write my opinion of you. But it is for mother's sake, and I assure you, if she have suffered, I will take it out of your miserly old bones, galvanized though they are with the metallic armor of Shylock, gold and the devil. It is a pity you were not on the Mount with Satan instead of Him whom you *pretend* to imitate. Satan would not have had to wait for *your* suppliant adoration. You are a scoundrel at heart. You have insulted my mother, my wife, and myself; and I hope the recollection of it may bring the blush of shame to your weazened, but brazen, old cheeks, till you go to your grave, and repent."

A GOOD MOVE.—A number of gentlemen in Glasgow have banded themselves together for the purpose of defacing the announcements of quack doctors, which are frequently exhibited in large numbers on the walls and hoardings of the city and suburbs. They have employed a man to go round and cover over all such bills with "lamp-black;" and it is said that in doing so he will have the protection of the police. The practice initiated in Glasgow may well be copied in all our large towns.—*The Lancet*, July 10, 1875.

NOTES AND QUERIES.

TANEYTOWN, MD., August 18, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The name signed to the report of "A Case of Poisoning by Strychnia" in your issue of the 14th is Birnie, not Bivine.

Very respectfully yours, etc.,

C. BIRNIE.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 17, 1875, TO AUGUST 23, 1875, INCLUSIVE.

COOPER, GEO. E., SURGEON.—Leave of absence extended fifteen days. S. O. 166, A. G. O., August 18, 1875.

STERNBERG, G. M., ASSISTANT-SURGEON.—Granted leave of absence for one month, on surgeon's certificate of disability. S. O. 151, Department of the Gulf, August 14, 1875.

WILLIAMS, J. W., ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of two months. S. O. 159, Department of Dakota, August 17, 1875.

"AUGUST 14, 1875."

SATURDAY, SEPTEMBER 4, 1875.

ORIGINAL COMMUNICATIONS.

THE USE OF REVULSIVES IN DISEASES OF THE NERVOUS SYSTEM.

BY ALLAN McLANE HAMILTON, M.D.,

Lecturer upon Nervous Diseases at Long Island College Hospital; Member of the American Neurological Association, etc.

DR. WEIR MITCHELL, in his very interesting clinical lecture* upon the Value of Rest in Affections of the Nervous System, says, "To be small one moment and large the next is a condition of health for the vessels." We recognize in most of the different neuroses of circulation a departure from this rule, and the treatment of these I especially propose to discuss. In congestion of nerve-matter, the vessels are deprived of their normal property, losing contractility undoubtedly through a paralysis of their vaso-motor fibres, which allow the inhibitory fibres to influence dilatation. The wise provision of nature, perivascular spaces in the brain-substance, first demonstrated by Robin and His, to some degree prevents sudden changes of diameter and consequent pressure of brain-matter; so where there is constant alteration of calibre attendant upon congestive diseases, the absorption and reformation of perivascular fluid must be seriously interfered with and the functional activity of the brain impaired. In the various diseases of the brain and cord dependent upon increase or diminution of blood-supply, the meninges of these organs must be affected to produce changes in the circulatory vessels of the nerve-substance itself. We may accomplish this best by revulsive applications to the back, so that there may be decided impression made upon the sympathetic ganglia and sudden shock to the vessels of the meninges, or by irritation of peripheral ends of spinal nerves, and inhibitory action as a consequence.

Brown-Séquard† recently stated that he had observed, after application of the actual cautery to the skin over the cervical sympathetic ganglion, a marked effect upon the iris, through stimulation of the ciliary filaments. We may, therefore, take for granted that vaso-motor filaments of other parts are influenced as well. The repeated transmission of reflex impression or sensation of a healthy character should be followed by a beneficial change in the nerve-substance. We observe in peripheral neuralgia that if irritation be made between the point of morbid sensation and the nerve-centre, the disease will be cured through a change in the character of the abnormal sensation sent from the periphery.

We are enabled to put this principle in play when pain results from disordered central action, such, for instance, as spinal irritation dependent upon anæmia. The revulsive action of certain agents will change the character of the trouble by first transmitting a reflex impression, or, second, altering the

circulation, through changes in the contractility of the arterioles.

Brown-Séquard‡ has shown the striking results following the use of revulsives in diseases dependent upon loss of trophic function, more particularly the wonderful reparative process that follows the alternate application of heat and cold to bed-sores. This condition is eminently a neurosis, and the results of this form of treatment must clearly justify the conclusion.

For the production of the revulsive effect, we must bear in mind the important fact, that application of the agent must be sudden and superficial. By observing these conditions we produce what is necessarily a shock.

Two forms of application which I consider of great value are, first, the actual cautery; second, the alternation of heat and cold. The use of the first in my hands during the past year has convinced me that for certain neuralgias no better remedy exists. Not only has it broken up attacks, but it has also most certainly brought about central changes resulting in healthy action of those parts.

Dr. William H. Thompson§ prefers the glass rod heated instead of the white-hot iron; and for convenience, perhaps, it is the better of the two. As far back as 1823 it was employed by Van der Kolk in epilepsy, with decided success; but he used it to produce a lasting ulcer, and not as an agent for obtaining a sudden and superficial irritation; nevertheless, he reports several cases, six in all, that were greatly relieved, and one cured entirely.

Delpsch recommended the actual cautery for neuralgia, but kept up a running sore.

The late Dr. Anstie|| seems to have been the first person who used the cautery-iron with a proper idea of its effects; and he abandoned the theory that it acted only as a counter-irritant. Anstie's opinion of its action, which is undoubtedly the correct one, is based upon the fact that the impression interrupts the conductivity of the nerve which is between the point of disease and the centre. Consequently, what I have said before about its being applied (not at the seat of pain, but between its focus and the nerve-centre) is the rational method.

I have often watched the truth of this in cases of facial neuralgia dependent upon carious teeth, sometimes by destroying the character of the morbid irritation, and supplanting it by the actual cautery impression; we may then have a new sensation transmitted to the sensory centre which is beneficial. In those cases of neuralgia where there are hyperæsthetic points, the actual cautery holds out a very good chance of relief. In epilepsy, when an *aura* precedes the attack, the burning of a part of the skin between the point from which it starts and the nerve-centre will abort subsequent seizures.

Much depends upon the temperature of the iron. It is absolutely necessary that it should be brought to a white heat. A red-hot iron will produce deep

* Rest in Nervous Diseases, Am. Clin. Lectures, p. 86.

† Boston Medical and Surgical Journal, July 31, 1875.

‡ Central Nervous System, p. 261.

§ On the Treatment of Sciatica, Am. Clin. Lec., p. 110.

|| Neuralgia, etc., p. 286.

action, and will destroy tissue by subsequent ulceration; the same results will follow the *slow passage* of the iron over the surface. The cautery-iron should invariably be white-hot: it should be drawn rapidly over the skin, and the result will be almost painless. The surface will be slightly discolored, and that is all, as the action is confined to the cuticle, which shrivels up and falls off in a few days. There has been a tendency of late to use the cautery-iron in convulsive affections, and it has been my privilege to see several patients who have gone through this ordeal without any benefit whatever, and have had their troubles aggravated by the nervous apprehension and dread associated with the white iron. As I have said before, the neuralgias are the neuroses that call for its use. I may relate the following case, which will illustrate the efficiency of superficial cauterization for sciatica:

Mr. F., twelve years ago, when a clerk, was obliged to sleep in the damp bedroom of a warehouse near the river. He then contracted a "cold" with attendant "rheumatism," and a condition was left which was unmistakably sciatica.

He consulted several medical men, among them one in this city, who suggested a blister. This acted beneficially, and the disease disappeared almost entirely. With every change of the weather, however, he had some reminders of the malady, and finally, in the spring of 1874, he was prostrated, and took to his bed. When I examined him I found marked atrophy of the affected leg, some anæsthesia, and marked contraction. Galvanism, deep hypodermic injections, and various counter-irritants, combined with constitutional treatment, had failed to do him good or abate the symptoms. I then directed his attending physician to use the cautery-iron. In three weeks he was up, and is now free from pain. The applications were made as soon as the previous burns were healed. Not only here does it act as a revulsive, but it unmistakably removes exudations that may press upon the nerve-sheath.

I have spoken of the uses of heat and cold for the relief of certain neuroses associated with trophic and circulatory defects. It remains for me to prove the efficacy of this treatment by the relation of experience; but first I wish to refer to the results of experiments by Chapman and others. We may tabulate them as follows:

COLD TO SPINE.

Physiological Action.

Muscular tension is lowered.

Sensibility is lowered.
Peripheral circulation increased.

Therapeutical Indication.

Overcoming the convulsive contraction due to acute or chronic central neurosis.

Relief of neuralgias.
Morbid conditions of sensibility associated with hemiplegia relieved.

HEAT TO SPINE.

Physiological Action.

Increased activity and function of sympathetic ganglia and contraction of vessels.

Therapeutical Indication.

Subsidence of inflammatory condition of nervous centres.

A consideration of the effects of both of these agents enables us to see that an alternate application of either would produce a sudden and beneficial change of tone, thus illustrating the words of Dr. Mitchell before quoted.

Every neurologist is overrun by a class of patients that constitute a certain *opprobrium medicorum*. These are patients with dysæsthesiæ, spinal irritation, and a few other maladies, confined chiefly to women, and dependent upon uterine diseases. After the employment of many remedies, and after finding hopeless results, constituted either by relapses or temporary improvement, the case is discharged. In these cases I found the alternate use of heat and cold to be followed by the most desirable effects, particularly in spinal irritation. Of twenty-six cases of this kind I have cured fifteen, and have greatly improved all the others. I had used phosphorus and electricity with indifferent success, but the alternate application of heat and cold to the spine produced a decided impression. I at first directed the patients to employ ice-bags, and hot flat-irons covered by flannel, but subsequently made use of the instrument I will presently describe. In hysterical affections this mode of treatment was of great use, particularly those forms characterized by lividity of the surface and unconsciousness, with rigidity. The surface became warmer and the circulation much more equable after ten or fifteen minutes' use of the revulsor. I wish to give examples of this form of treatment.

Case I.—Patient married eight years; no children; complains of headache of anæmic variety, somnolency, inattention, loss of memory, and mental incapacity; very pale and thin, pain in back. A previous physician found uterine trouble, which was removed. Pyrophosphate of iron, strychnia, and hot and cold applications; benefit in two weeks, and cure in three months.

Case II.—Patient at present under treatment. After an acute attack of sickness (probably typhoid fever), convalescence began; some pain in the back, and tenderness on pressure; feebleness and indisposition to take exercise, tight constriction of waist, headache; somnolency continued through the forenoon; very difficult to arouse. The husband of this patient is obliged to throw cold water in her face before she will awake. Great inability to fix attention upon anything. It was impossible for her to read. Dr. Loring examined her eyes, and found paleness of optic disks. Under a systematic use of the revulsor during the first three months, these symptoms have one by one disappeared, till but few are left. Three weeks after treatment, she could read, and the headache had gone. Sleep is much better, as it does not extend over a natural period. She was in a very curious condition at night. Between the hours of eight and eleven she seemed to be very wide-awake and vivacious, but during the early part of the day she was stupid and heavy.

Other cases I might present, and would prove that the action of heat and cold begins at once, and that early recovery is to be expected. For the application of these agents I have devised the instrument figured in the cut. It consists of two chambers

of brass three inches in diameter by one and a half inches deep. These have screw-plugs inserted so that they may be removed and the chambers filled, one with cold water and salt, the other with hot water. These chambers are fixed on a rod, and separated by an insulating or non-conducting substance. The rod terminates in a handle. The flat surface covered by thin flannel is placed against the bare back, on either side of the spinous processes of the vertebrae, and the instrument is passed up and down quite rapidly. As the heated surface moves instantaneously to where the cold one was an instant before, the effect is quite marked.

Dry heat and dry cold are much better as therapeutical agents than moist heat or moist cold. The effect is energetic; the skin is influenced more quickly, as there is no fluid between to act as a non-conductor. Dr. William H. Thompson, of New York, to whom I have shown this instrument, has expressed his ideas very strongly upon this point.

A consideration of the action of other revulsive agents would take many pages. I must say a word, however, of the virtues of the localized ether-spray to the spine. I can conceive of no better treatment for chorea and other convulsive disorders. I have witnessed its effects even in convulsive disease of adults. Shaking palsy, and the tremor of alcohol and sclerosis, may be moderated. It is safe to say that fifteen or twenty applications of the spray in most cases of chorea will effect a cure. I have tested it alone and with other remedies, and in several cases it cured the disease without adjuvant treatment.

In paralytic conditions, local application of the revulsor to the muscles themselves seemed to increase the circulation in the tissues much more vigorously and successfully than did the faradic current. Dr. G. M. Beard, of New York, a year or so ago exhibited at one of the meetings of the Academy of Medicine an apparatus for applying hot air to a paralyzed limb in hemiplegia. It consists of an earthen pipe (Dr. B. demonstrated his remarks by a common earthen drain-pipe) heated to a moderate degree; this was placed about the paralyzed member. His results were good. Heat and cold I am convinced are valuable remedies that have not been thoroughly made use of.

MEMBRANOUS CROUP: TWO REMARKABLE CASES,

SHOWING THE EFFICIENCY OF MEDICINAL AGENTS BOTH IN THE CURE AND ARREST OF THE MALADY.

BY J. J. MAGUIGAN, M.D.

THE subject of the first case is a male child, two and a half years of age, whom I saw at 8 P.M., twenty-four hours after the onset of the disease.

He presented that assemblage of phenomena so characteristic of laryngeal obstruction,—namely, contraction of the lower part of the chest, with sinking in of the soft parts above the clavicles and the sternum in the act of inspiration, which was slow, laborious, and stridulous; the voice was husky; the facial expression wild, anxious, and appealing; pulse 130, and fever pretty high. There were no exudation-patches on the fauces. Spasm was a prominent and aggravating factor in the dyspnoea.

Coxe's hive syrup having been administered without effect, I ordered a heaping teaspoonful of alum, dissolved in sweetened water, which provoked emesis. This eased up his symptoms to a degree by subduing the spasmodic element against which it was directed.

At 10.30 P.M., two hours later, I returned, and found that he had steadily grown worse, there being now an exaggeration of all the portentous phenomena aforementioned, and higher fever. I again administered an emetic of alum, and then ordered nauseating doses of ipecac, $\mathfrak{z}\text{i}$, to be repeated every hour, with large mush-poultices to the neck, and further directed that about two o'clock another emetic should be given.

About five o'clock of the morning I was again summoned to the child. He had now reached the very climax of his suffering, and was in the jaws of death. He lay on his side, with his head violently retracted, stretching the trachea to its utmost limits in a superhuman effort to carry on respiration. I heard for the first time a soft, shifting rhonchus in the larynx.

I cleared the fauces of a quantity of mucus and blood by provoking reflex action in the part with the handle of a spoon, and then gave an emetic of thirty grains of the sulphate of zinc. The vomit contained mucus and blood, broken bits and flakes of white membrane, and one large fragment an inch in length and several lines in breadth.

Considerable relief, of course, followed the expulsion of these matters, but the relief was relative, not absolute; the symptoms were still alarming, and it was manifest that the great bulk of the membrane, nearly all, in fact, remained firmly adherent in the throat, though a feeble flapping sound—the *tremblement* of the French—could be heard in the larynx on inspiration.

With a view to the speedy softening and detachment of the membrane, I placed under the nostrils of the child a cup of slaking lime, a practice strongly recommended in the text-books and in the didactic lectures of the course. The experiment, in my hands, was unsuccessful and unfortunate. In the first trial the fumes arising from the lime nearly suffocated the child: he tossed his head wildly about in search of a breath of pure air. In the second trial, and even in the third, the dyspnoea was equally aggravated.

I then directed the atmosphere of the room to be charged with vapor-steam generated from a caldron of boiling water placed over the fire. The apartment was a contracted one, 10 by 14, and was constantly occupied by at least three or four of the



sympathizing friends of the family. In an hour afterwards, on my return, I found the air saturated with moisture, but the child was worse, his face flushed, wild, and excited, and the dyspnoea frightful. I instinctively opened the doors and windows, letting the fresh air in or the bad air out, to the manifest relief not only of the child, but also of the other panting inmates of the apartment.

These methods proving unavailing or inapplicable, I next tried a *hand-ball atomizer*, the kind used for perfuming handkerchiefs, and, filling it with lime-water, I played a beautiful spray into the fauces and larynx for at least five minutes. For the first time my efforts seemed to have met with a favorable response. In an easy manner this instrument accomplished the conjoint objects sought to be attained by the other two methods,—viz., the application to the larynx of moisture and a substance capable of acting chemically upon the membrane and dissolving it. The lime-water, which was the official solution, was used cold. The spray was employed half-hourly for the next twelve hours, and then hourly until convalescence was declared. The relief which it afforded, as indicated by the diminished dyspnoea, was always prompt and decided, particularly after the first few applications, when the membrane began to evince signs of rapid disintegration. The cough became less sonorous and more moist, and the expectoration free, the hawked-up matter being swallowed almost invariably. On the morning of the fifth day the larynx was entirely free. Respiration was entirely unimpeded, yet rough and croupal; the voice also remained husky, and a constant, short, laryngeal cough tortured him for the next twenty-four hours, for the relief of which a mixture of hydrate of chloral, tinct. opii, and ipecac was given. A simple catarrhal cough remained for two weeks or more.

So much with regard to the membrane, the expulsion of which may be considered the *sine qua non* to recovery; but scarcely less inimical to the life of the patient in this case was the superadded spasm. This element, though it played a subordinate rôle, would have determined the death of the patient but for the energetic manner in which its influence was combated by emetics and nauseants. By it all the frightful paroxysms of dyspnoea were superinduced. The most violent of these paroxysms, as well as a general exacerbation of the disease, invariably occurred at night on the second, third, fourth, and even the fifth night, the attack setting in at nightfall and subsiding at dawn of day. This nocturnal exacerbation and the prominence of the spasmodic element are two phenomena in the clinical history of this affection which have been fully portrayed by Jenner in his recent clinical lecture on true croup (*Medical News* for April, taken from the *Lancet* of January 16).

Throughout the treatment the child's vital powers were sustained by administering its aliment to it during the intervals of comparative quietude.

The subject of the second case was a baby eight months old, to whose condition my attention was called on the third day of my attendance on the first case by hearing from it a faint croupal cough.

An examination revealed considerable redness of the fauces, with patches of exudation on the tonsils and posterior wall of the pharynx. This, it will be observed, was an anatomical departure from the other in the incidence of the attack.

The teachings of Trousseau have always had for me a peculiar charm. I took up a stick whose end was wrapped with a bit of cotton, and, charging it heavily with powdered alum, I swept the fauces. In two hours after I threw into the pharynx with the atomizer a spray of a ten-grain solution of sulphate of copper. The baby shortly after vomited. The appearance before noticed vanished within twelve hours, excepting a slight erythema of the mucous membrane. A croupal cough with huskiness of the voice remained for three or four days.

Now let us return for a moment to the treatment, and see whether, in the rapid exfoliation of the membrane observed in the first case, the lime-water was not the principal agent. In a disease which presents such a frightful mortality of nineteen deaths out of every twenty-two cases (Dr. Ware's statistics, given by Flint), it would be absurd to ascribe the whole result to an inherent tendency. But it may be said that nature took the initiative, and already began the work of resolution. In this, however, she did no more than she always does, *i.e.*, commence an operation which she is unable to complete; in the vast majority of cases death does not occur until as late as the fifth or sixth day, when the process of resolution has advanced as far, at least, as was observed in this case. I do not question the influence of the pathological turn-point on the success of the treatment in so far as it had weakened the vitality of the membrane and opened it up to the solvent action of the lime-water.

Lime-water is an active chemical solvent of pseudo-membrane. "We have frequently found," say Meigs and Pepper in their magnificent treatise on Diseases of Children, "when fragments of firm white exudation have been placed in lime-water at a temperature even lower than that of the buccal cavity, that the exterior began in a very short time (half an hour) to undergo disintegration, and that the whole fragment was reduced in a few hours to a granular putrilage." Oertel, describing the same process upon the toughest and most solid membranes he could find, says, "After the lapse of not more than fifteen or twenty minutes, particles of greater or less size gradually separated from the membranes, and after from thirty to forty-five minutes they are completely broken down, and, with a slight agitation of the test-tube, dissolved into a turbid, flocculent fluid" (Vol. I. *Cyclopædia of the Practice of Medicine*, edited by Ziemssen).

Respecting the second case, the influence of treatment was no less striking and palpable, assuming, as we are obliged to do, that the case would have developed into croup, or an extension of the exudation into the larynx.

I append to this report the history of the following case, which just at this moment has passed out of my hands, as an admirable commentary upon some of the views therein expressed, and the value of the lime-water treatment. The subject was a

little girl, A. C., two years and a half old. When I saw her, there were patches of exudation over the tonsils and pharynx, and she had those objective symptoms of laryngeal obstruction described in the first case, but less severe.

I instituted the same line of treatment given in the first case, but, owing to the obstinacy and perversity of the child, and the want of control over her by her parents, the spray could not be employed. The treatment in every other respect was precisely identical with that given in the first case, viz., emetics and nauseants. *Resolution had feebly commenced on the third day.* The child died at 11½ P.M. of the fifth day.

1241 NORTH SEVENTEENTH STREET, May 14, 1875.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF PROF. D. HAYES AGNEW, M.D.

Reported by WM. M. MASTIN, M.D., Resident Surgeon.

ANEURISM OF THE EXTERNAL ILIAC ARTERY—COMPRESSION—CURE.

THE subject of these notes is an active, robust laboring-man, about 48 years of age, and of intemperate habits. He states that he was born in Ireland, of healthy parents, and came to this country some fifteen years ago. His own health has always been perfect, allowing him to follow constantly his occupation—that of a ditch-digger—up to the time of his present disease.

About nine months since, while making a short journey on foot, he tripped and fell, sustaining a slight sprain of the right ankle-joint. This was soon followed by swelling and pain, extending up the inner side of the thigh to the pelvis, with a perceptible limp in his gait. However, with the exception of these erratic pains, which have continued ever since, there was no evidence of any other injury until four months later, when he noticed a pulsation in the right groin, and, on closer inspection, discovered a small tumor about the size of a chestnut.

His medical adviser, whom he at this time consulted, directed perfect rest, with elevation of the limb; but, notwithstanding the strict observance of these measures, the pulsation grew more forcible, and the tumor gradually increased in size until it has attained its present dimensions. With this history he was received into the surgical wards of the University Hospital, May 14, 1875.

At the time of his admission, inspection reveals a distinct but rather diffused swelling of the right groin, with a slight sulcus or groove obliquely crossing it a little below its middle, corresponding to Poupart's ligament; the tumor has an expanding or heaving movement. What appears to be a diffused swelling is found by palpation to be a circumscribed tumor, elastic and compressible, with tolerably thick walls, and having a pulsation synchronous with the action of the heart. This tumor is about four and a half inches in length. Taking Poupart's ligament as a line, it extends from a point two and a half inches above the middle of that ligament to two inches below it. Laterally, the diameter is almost the same: the tumor reaching from half an inch to the inner side of the anterior superior spinous process of the ilium to very near the mesial line.

On placing the ear over the tumor, the characteristic bellows-sound or aneurismal bruit is plainly heard.

This murmur extends for a short distance into the sound portion of the femoral artery.

Cutting off the supply of blood to the part by compressing the abdominal aorta, or thrusting the primitive iliac back against the brim of the pelvis, stops the pulsation, making the tumor subside in a measure and grow sensibly smaller. No disease of the heart or large arteries can be detected by careful auscultation; but, on examining the pulse on the two sides, the right radial artery is found to be extensively atheromatous, feeling like a stony mass beneath the finger.

Remembering the man's occupation, and the habit these men have of using the long-handled spade for their work and making the upper part of the thigh act as a fulcrum upon which the handle of the spade rests in throwing up the earth, I find the tumor occupies about this position, and, perhaps, may have been caused by this pressure and strain on the already diseased artery.

In view of this diseased condition of the man's arterial system, compression of the artery was decided upon as giving the best chance of cure. Accordingly, as a preparation for this procedure, he was placed on light diet, and the leg elevated on an inclined plane, with directions to have the bowels thoroughly emptied.

May 17.—At 7.05 P.M., pressure was begun by an abdominal tourniquet, the pad of which compressed the common iliac. The man stood the pressure until 10.45 P.M., when the pain was so great as to necessitate the administration of ether. Under the influence of this anæsthetic, compression was continued one hour and fifteen minutes longer, when the tourniquet was removed. After the removal of the tourniquet the pulsation was found to be somewhat lessened, and the walls of the tumor thickened, firmer, and less elastic. Patient complained of tension and stiffness in the groin. Elevated the leg, and quiet enjoined.

May 20.—Pulsation and general condition of tumor remained unchanged.

May 22.—Compression again commenced. 2.45 P.M., artery completely occluded. Pain required the early administration of ether. 6.45 P.M., pressure let up for a moment, and pulsation found to be much lessened. Temperature of leg tolerably good, but enveloped it in cotton batting. 2.45 A.M., tourniquet removed entirely. Pulsation still more diminished. Tumor continued to grow hard and more resisting. Temperature of leg remained good. Patient eleven hours and forty-five minutes under influence of ether.

May 26.—Consistence and impulse of tumor remained unchanged, but tumor seemed to be growing larger, as it had encroached on median line. The iliac was more involved.

May 29.—Put patient under ether and compressed abdominal aorta, cutting off blood from both extremities for one hour and ten minutes. After the hour the tumor seemed almost solid and impulse scarcely discernible.

May 30.—Compressed abdominal aorta for a short time, at the expiration of which, impulse in tumor had entirely ceased, and tumor perfectly solid and firm. No pulsation in femoral. Temperature of limb excellent. Continued with warmth to and elevation of the limb.

June 2.—Tumor remained a hard, solid body. Pulsation returned in popliteal artery. Patient in an excellent condition.

June 6.—Patient discharged cured.

A PROPHYLACTIC FOR SORE NIPPLES (*The Medical Record*, August 21, 1875).—Dr. Julius Fehr recommends the local use of tannate of lead and glycerin, two or three times daily for about one month before parturition, as a reliable preventive of sore nipples.

TRANSLATIONS.

PENETRATING WOUND OF THE CHEST—RECOVERY (*Le Mouvement Médical*, August 7, 1875).—M. Hervieux reports the case of a young man who, with the intention of committing suicide, stabbed himself with a knife in the fourth intercostal space immediately above the upper edge of the fifth rib, one and a half centimetres below the left nipple and eight centimetres from the left border of the sternum. The blade penetrated the thoracic cavity to the depth of nine centimetres. When first seen, he was covered with blood, the clots, which were then hastily removed, weighing between two and three pounds. The wound was quickly cleaned, three pins were passed from one side to the other, and it was then accurately brought together by a twisted suture, thus arresting all external hemorrhage. In a few moments, however, a thrombus the size of a hen's egg formed at the external angle of the wound, and outside of this and below it there was developed an elastic and tympanitic tumor, which was about as large as two fists, and was due to subcutaneous emphysema. These, however, remained stationary. The pulse was then only eighty-four a minute, but was soft, feeble, compressible, intermittent, and irregular. Respiration was high and frequent, and each inspiration was accompanied by a sharp pain at the bottom of the wound. His face was pale, almost exsanguine. He had neither cough nor bloody expectoration. Cold compresses were applied over the wound, followed later in the night by poultices of flaxseed meal. The following day the emphysema had disappeared; the thrombus still persisted; there were fever and dyspnoea. On auscultation nothing abnormal was found on the affected side. On the fourth day the pins were withdrawn, and the wound was found to have united by first intention. His convalescence was uninterrupted, and in three weeks he was entirely well. M. Hervieux concludes that the heart had just escaped being wounded, but that the knife must undoubtedly have reached the lung, although the thickness of the left side of the heart separating the lung from the anterior wall of the chest probably caused the wound to be of but slight depth. He admits the absence of a certain number of positive signs which we are accustomed to associate with a pulmonary wound, but refers to several cases in which the diagnosis was beyond question, and in which, as in this one, there was neither cough, bloody expectoration, pneumonia, nor pneumothorax, and recovery was equally speedy and uninterrupted. J. W. W.

URÆMIA IN CANCER OF THE UTERUS (*Le Progrès Médical*, July 24, 1875).—M. Raymond reports the case of a woman, æt. 50 years, who died of cancer of the uterus. During the last four days of her life she urinated with difficulty, and had a profuse diarrhoea; coma had preceded death for forty-eight hours. At the autopsy the right ureter was found to be compressed by the uterine cancer. The kidney of the same side was much atrophied in its substance proper, but its pelvis was considerably enlarged. The two ureters were large, and contained a clear citron-yellow watery fluid, which on analysis was found to be composed of water .977, urea 3.85, albumen 7.60, alkaline chlorides 6.10, phosphates, sulphates, etc., 5.45. The experiments of Hermann demonstrate that the proportion of urea in the urine diminishes relatively to the volume of the latter when pressure is made on the ureters, and when this pressure is equal to that of sixty millimetres of mercury the urea disappears altogether. It is easily understood, then, why women suffering from cancer of the uterus still pass a normal quantity of urine, which, however, is only water, when there is incomplete compression of the ure-

ters, and why also they die of uræmia. These facts have been verified in several cases at the Salpêtrière.

J. W. W.

SALIVARY CALCULUS THE CAUSE OF AN INFLAMMATION OF THE VELUM PALATI AND THE BASE OF THE TONGUE (*Le Progrès Médical*, July 10, 1875).—M. Gouguenheim reports the case of a man æt. 35, subject to winter cough, but presenting neither the rational nor the physical signs of tuberculosis. He complained of a pain in the throat, at first slight, but becoming more and more intense. There was a slight redness of the soft palate and its arches, but no change in consistence could be recognized by the touch. The pain became more severe whenever, during the examination, the base of the tongue was depressed. He was tormented by incessant movements of deglutition, and complained of a continual spasmodic sensation in the throat. At the end of four days the pains, which were growing intolerable, suddenly ceased, after the evacuation of an elongated cylindrical concretion, a little more than a centimetre in length. It was of a dirty-yellow color, and was formed of a number of layers of organic and inorganic matter disposed in a concentric manner. It was found on examination to be a salivary calculus, and had probably been lodged above the aryteno-epiglottidean folds or behind the greater cornu of the hyoid bone. J. W. W.

HEPATITIS (*Le Progrès Médical*, July 24, 1875).—M. Cornil has had the opportunity of studying the livers of patients who had died from a parenchymatous hepatitis occurring in the course of such diseases as leucocythæmia, typhoid fever, smallpox, etc. He has found in these cases a lesion analogous to that which he had already pointed out in certain cases of cirrhosis. The smaller intralobular biliary canaliculi were filled with epithelial cells, placed end to end, and which finally obliterated them. As these alterations are especially marked in the smallest peripheral canals, it is evident that the bile produced in the central canals cannot escape if the lesion is much advanced. The mode of production of the jaundice is thus explained: it is due to the disease of these canaliculi, and not to obliteration of the large biliary ducts, as generally believed.

J. W. W.

CYSTIC ENLARGEMENT OF THE APPENDIX VERMICIFORMIS (Dr. Wenzel Gruber: *Virchow's Archiv*, lxi.).—In a series of cases of cystic enlargement of the processus vermicularis, the following, which was found in the body of a man who died of tuberculous disease of the lungs and intestines, is deemed worthy of notice.

The process at its lower portion was distended into a round sac with thick walls, while its upper portion had been transformed into a thick pedicle, through which there was a canal of small calibre. At its attachment to the cœcum it had been converted into a short tube of large size but with thin walls, and which represented the neck of the tumor, being connected below with the sac and above with the cœcum and the canal in the pedicle. The sac contained a quantity of stringy compact mucus, which tightly distended it.

The larger part of the ring-shaped opening of the sac was joined to the omentum majus by adhesions, but there were no connections between the tumor and the peritoneum lining the upper part of the iliac fossa. The orifice between the gut and the appendix must have been of small size before any pathological changes took place, but had perhaps been rendered much smaller by the chronic inflammatory processes accompanying the tuberculous ulceration which had been taking place.

W. A.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

A NEW HAPPY FAMILY.

THE establishment of a homœopathic hospital in New York has given a good-natured contemporary the opportunity of congratulating thereupon the followers of Hahnemann, the practitioners of opposing schools of medicine, and the public at large, and, like Mark Tapley, of "coming out strong" under rather unfavorable circumstances. It bases its cheerfulness in the matter upon the doctrine of the survival of the fittest, holding that if homœopathy is what we believe it to be, it will certainly be annihilated in the professional struggle for existence, and all the sooner for being brought into greater prominence and more active competition. We heartily coincide with these views, which are doubtless correct; but when it also looks forward hopefully to the appointment in connection with the same institution of a sort of supervisory or consulting board, to be composed of regular practitioners, who are to make the diagnoses, and, when the issue happens to be a disastrous one, are to verify them by "autopsical examination," we cannot share its sanguine anticipations. The adoption of the proposed plan would leave our homœopathic brethren sandwiched, as it were, between two layers of what they would term "allopathy," with merely the privilege of administering their attenuations and observing their effects or the absence of them; while, on the other hand, the consultant or diagnostician would frequently have to stand aloof and witness what would be, according to his views, the

needless sacrifice of human life, with the unpleasant feeling of being morally, if not legally, *particeps criminis*. We can imagine one of our venerable professors, a believer in counter-irritation, revulsion, and venesection, having, for example, made a diagnosis of congestive hyperæmia of the brain, threatening apoplexy, in a plethoric subject, modestly retiring into the background while his infinitesimal brother steps forward, consults his list of symptoms, and administers the hundred-thousandth dilution or trituration of what he conceives to be the appropriate remedy, after which, according to the "contemplated" programme, the patient would probably pass again into the hands of the "old school."

It seems somewhat unjust to exclude the other medical sects from the benefits of this new co-operative association, and we would suggest resigning the "autopsical" department to the Thomsonians, allowing the eclectics to sign the death-certificates, and requesting the "medical electricians," "cancer-doctors," and "herbalists" to attend the funerals in a body. The female doctors would have to be assigned to some department of importance and responsibility, or the managers would be overwhelmed with petitions and memorials. The "practical physicians," the "healing mediums," the "seventh sons of seventh sons," the "pow-wows," *et id genus omne*, whose services could probably be secured, and with equal propriety and judgment, would still remain to be provided for. Then would come to pass the saying which is written, "The wolf also shall dwell with the lamb, and the leopard shall lie down with the kid; and the calf and the young lion and the fatling together."

It must be understood, however, that the first-mentioned scheme of a board to make diagnoses and autopsies is not merely visionary or hypothetical, for we are told that "a plan having such an end in view is already under contemplation by the Commissioners of Charities and Correction," who, we believe, will be the managers of the new hospital.

We fear the commissioners will have to "contemplate" for an indefinite period before they find, even among the homœopaths, the necessary ignorance and imbecility upon which to base such an arrangement, and we feel sure they would encounter a still greater difficulty in persuading reputable physicians or surgeons to serve upon the diagnostic and "autopsical" board.

Seriously, although we do not view the acquisition of this new institution by the homœopaths as of any importance to the medical or scientific world, and believe it to be predestined to the obscure fate

of its predecessors in other cities, yet there is one aspect in which the matter assumes a gloomy significance. When we remember the intellectual status of the men to whose care, under its auspices, human lives will be confided, and when we recall the list recently published in one of our daily papers, of cases neglected and maltreated at a similar institution in this city, we cannot but feel that the experiment is almost too costly.

We can see no more reason why a homœopathic practitioner should be allowed the opportunity of demonstrating his lack of common sense at the cost of suffering humanity than why any of those more generally recognized as 'quacks' should be allowed the same privilege; and our contemporary's suggestion that we should "combat error on the common ground of reason and the broad platform of enlightened liberality" applies with equal force to all who practise by an exclusive dogma.

LEADING ARTICLES.

THE INFLUENCE OF THE LOWER ORGANISMS IN THE PRODUCTION OF INFECTIOUS AND CONTAGIOUS DISEASES.

II.

HAVING in the earlier portion of this article given some account of bacteria in general, it now remains to follow up, so far as possible, the progress of investigation as regards the influence of these organisms on disease, and to examine the present state of our knowledge concerning this influence.

In doing this we shall take up in the first place the subjects of pyæmia and septicæmia, since it was in regard to the occurrence of the lower organisms in these conditions that the earlier investigations of their action were made.

The frequency and gravity of septic complications of wounds have made their etiology, pathology, and treatment one of the most important and interesting of all surgical problems, and the scanty success which has thus far attended all prophylactic and remedial measures shows that the problem in part, at least, is still unsolved.

The intimate connection between putrefactive processes and the group of symptoms called septicæmia has been regarded as established since the celebrated experiments of Gaspard.* Their cause was at first supposed to lie in the absorption of the pus of the wound through the open mouths of the several vessels; then in poisoning of the blood by pus formed in the interior of the vessels by phlebitis. Piorry about 1835 gave a full and accurate account of those symptoms to which he afterwards gave the name septicæmia, by which they have

since been known. He ascribed the disease solely to the effects of the absorption of putrid matter through the lungs, skin, intestine, or the surface of a wound, but did not attempt to discover the source of its virulence.

Panum, in 1856, spoke of a non-volatile septic poison which is insoluble in absolute alcohol, soluble in water, and not destroyed by prolonged boiling. Robin considered the virulence due to a catalytic effect produced upon the humors and tissues of the body by contact with a substance in which putrefaction had brought about an isomeric change in the fundamental "immediate principle." He said, "Putridity is not virulence; on the contrary, when it has advanced to a certain degree it destroys virulence;" a statement now universally accepted. Bergman also took the same view, believing the toxic action of putrid substances to be due, not to inferior organisms, but to a diffusible nitrogenized toxic substance resisting alcohol, ether, and boiling heat, and formed during putrefaction.

While thus certain investigators examined the causes of pyæmia and septicæmia from this point of view, others were not wanting who continued to maintain the bacterial origin of disease, and their views were supported by very numerous and varied experiments, to some of which allusion will now be made.

Mayrhofer (1863) claimed that puerperal fever was due to low organisms, which he called vibriones. He observed that they appear in the lochia of healthy lying-in women in small quantities on the fifth day after delivery, but in those attacked by puerperal fever, immediately after delivery, and in large quantities. Injecting a putrid infusion of meat into the uterus of a rabbit soon after delivery, its death resulted from endometritis with septicæmic symptoms.

Leplat and Jallard made inoculations with putrefying animal and vegetable infusions containing vibriones without causing septicæmic results. They hence concluded that vibriones coming from putrefying animal and vegetable substances cause no accidents when injected unless accompanied by virulent agents, which latter are alone responsible for any unfortunate results that may ensue.

The experiments of Coze and Feltz (1865), they asserted, proved that the blood of animals inoculated with putrefying fluids is itself infectious, that it contains bacteria, and that the infectious ferment gains in force by its passage through the organism. They claimed also that the organisms found in the blood are the active efficient agents in the poisoning, and they agreed with Pasteur in saying that there are two phases of putrefaction, of which only the first would cause poisonous symptoms. Hence putrefaction destroys virulence.

In 1869-72, Davaine, investigating anthrax (malignant pustule), discovered bacteridia in the blood of patients. In a report upon inoculations with putrid blood, Davaine confirmed the experience of Coze and Feltz in regard to the gain of virulence by repeated transmissions, and also the destruction of the septicæmic virus by putrefaction. Davaine's experiments received much attention, and at first his conclusions were distrusted;

* Jour. de Phys., par Magendie. T. i. p. 1, 1822, and T. iv. p. 1, 1824.

but, having been substantially confirmed by other investigators, the following points were generally conceded. 1. Susceptibility to the virus varies in different animals. 2. Putrid blood loses its virulence as it gets older. 3. Septicæmia is a putrefaction taking place in the blood of an animal, and induced by bacteria and vibriones. 4. Blood putrefied within the body is much less poisonous than that of an individual whose death has been caused by or who is still suffering from septicæmia, typhoid fever, or gangrene of the lung. 5. The one-millionth part of a drop of such blood injected into the cellular tissue of a rabbit will cause the death of the animal within twenty-four hours. 6. The poisonous quality of the blood is entirely due to the presence of bacteria.

Vulpian and Onimus contended against these conclusions; and subsequent experiments, especially those made by Billroth,* which excited universal attention, have tended to diminish the importance claimed for bacteria.

Billroth's experiments, which were chiefly clinical, were most thorough and extensive. He found in two hundred autopsies, of all diseases, coccobacteria present in eighty-seven in the pericardial liquid. The longer the interval between the time of death and the examination, and the higher the temperature of the air, the more certainly were these organisms found. Although they are found in abundance during life on many of the mucous membranes, it is probable that they make their way into the tissues and circulation only through the lungs, and that they remain, especially in the blood, in the form of germs capable of development.

Experiments made by Lewis and Cunningham, Calcutta, in 1874, upon dogs, showed large quantities of bacteria after the injection, not of a putrefying organic liquid, but of ammonia, into the peritoneal cavity.

We have thus endeavored to give some idea of the progress of investigation in this direction, but, of course, have been obliged to omit even the mention of numerous highly meritorious communications or monographs. The very recent literature of the subject is voluminous. Birch-Hirschfeld,† to whom we are very considerably indebted for the facts and discussions of the present part of our article, cites no fewer than eighty-six recent contributions, most of which have been published within the last two years; and one-half of these give the results of experiments upon pyæmia and septicæmia.

And yet, what exactly do we understand by these terms? In regard to this, Birch-Hirschfeld speaks nearly as follows:

"The names septicemia and pyemia are, by many authors, used almost as if synonymous, whilst others regard these affections as perfectly distinct. When, however, the exact line of division between them has to be defined, there is very little agreement. It is

certainly true, as Virchow has demonstrated, that the morphological introduction of pus into the circulation does not result in pyemia, yet this affection is beyond doubt closely connected with suppuration. It must then be distinctly separated from the septicemia caused by putrid matter alone, and entirely unconnected with pus. Now, if it can be shown that in pyemia dependent upon suppuration the putrefaction of pus gave rise to the infection, it would certainly appear as if pyemia itself were only a species of septicemia.

"Another view, and one widely diffused, lays stress upon the occurrence of symptoms of embolic metastasis as a distinguishing point. When traumatic infection results fatally without the occurrence of metastatic emboli, the affection is termed septicemia; under the contrary circumstances, pyemia. This distinction will hardly, however, suit all cases."

We must confess that an examination of Birch-Hirschfeld's abstract of the various contributions to our knowledge of the influence of bacteria on pyæmia and septicæmia is at first not inspiring.

The forty-odd investigators reach nearly as many conclusions, and we must admit, as does Birch-Hirschfeld himself, that their position on these points is certainly very contradictory. Indeed, there are very few assertions made which, after a careful review of all the authorities, are found entirely undisputed. If, at first sight, this position of affairs seems to the seeker after truth somewhat depressing, yet we must remember that much of this work is good work and genuine. It is work of research, and not mere speculation. We hold no axiom to be more eternally true than this: that good work always pays. These facts, which now seem so scattered, so contradictory, so impossible of assimilation, will one day be found parts of a plan which, as yet, we are unable to comprehend.

The hope must indeed be regarded as illusive, that in this department the object of research is to be attained without great difficulty. The processes concerned are of such a complex nature, and our methods in many respects so inadequate, that it is hardly to be expected we shall reach at this time results which shall be entirely unquestioned.

We cannot conclude this portion of our subject better than by quoting the opinion of one of the very greatest of living pathologists, Virchow.‡

Although these remarks of Virchow particularly relate to Billroth's work already alluded to, yet they are equally applicable in many respects to the subject in general. Virchow says, "Without venturing an opinion as regards the correctness of the botanical section of this admirable work [Billroth's "*Coccobacteria Septica*"], I must confess that it agrees only in part with my own preconceived ideas upon the subject. I certainly hold as correct the idea that the ordinary putrefactive germs are sufficient to explain a greater part of the local, as well as a certain portion of the

* *Coccobacteria Septica*, etc. Berlin, 1874.

† Die neueren pathologisch-anatomischen Untersuchungen über Vorkommen und Bedeutung niederer Pilzformen (Bakterien) bei Infektionskrankheiten. Schmidt's Jahrbücher, 1875, No. 5, p. 169.

‡ Vortrag über die Fortschritte der Kriegsheilkunde, etc., besonders im Gebiete der Infektionskrankheiten. Berlin, 1874. Reprint from Allg. milit.-ärztl. Ztg., 36, 41, 1874.

general, infectious diseases. This is that province which we have always conceded, of which the highest development is septicæmia.

"The greater number of diphtheritic processes are comprised under this head, in regard to the affinity of which with putridity we have spoken long since. Their relationship is certainly closer than has been previously admitted,—indeed, closer than even Billroth is as yet inclined to admit."

Further, Virchow maintains, if pathological significance be attributed to parasitic plants, the identity of the various forms of miasma must be conceded, and it must also be admitted that this same miasma gives rise, according to the surroundings, to typhoid fever, dysentery, diphtheritis, hospital gangrene, or septicæmia. If, with Billroth, we look upon all these parasitic plants as mere vegetation-forms of coccobacteria septica, cholera may also be included here.

Only two explanations appear possible in this direction. Either the micro-organisms of all these disease-processes are identical, and it is necessary to assume poisonous substances in connection with the fungi and algæ yet distinct from these; or the micro-organisms are, *in spite of apparent similarities, different*, and form the carriers and excitors of the most serious processes in the body; they are in fact the peculiar causes of disease.

The rôle of the micro-organisms may again, under the latter view, be understood variously. Either these objects attack the living portions of the body directly, or they bring with them a poison which threatens life. This poison may either exist in the micro-organisms themselves, and they consequently be regarded as poisonous plants, or the putrefactive organisms are related to the putrid poison as the yeast-plant is to fermenting substances: they are ferments.

For the great infectious diseases, Virchow is inclined to the last-mentioned hypothesis. These distinct poisons are separable from the micro-organisms which have excited them.

It may easily be believed, therefore, that a mass of fungi (*pilzheerde*) may collect at a point of inoculation or of wounding in the human body, which may secrete poison the amount of which might be sufficient to put the whole body in jeopardy, without the fungus itself being taken up by the blood.

According to Panum's researches, septicæmia cannot be referred to *mechanical* disturbance by means of micro-organisms. It does not follow upon this, however, that the excitation of putrefactive poisoning is possible without the presence of putrefactive germs. *On the contrary, the more we investigate, the more evident it appears that it is indeed the organisms themselves which cause the mischief.*

In putrefactive processes the micro-organisms may easily be identified, and their influence upon the progress of decomposition may be conveniently observed. The difficulty of understanding the pathological significance of these processes would only be insuperable *if in fact a single plant* produced the various

forms of putrefactive organisms. Here, however, practical research in regard to the physiological and pathological action of the disease-germs is decidedly in opposition to morphological research.

If these form-elements cause different effects, they themselves must be essentially different. We cannot, it is true, directly see these essential (innate) differences in such minute organisms; but we must remember that neither can we tell, from the germinative cells of the egg, numerous pathological growths, etc., what may come out of these. If it happens by inoculation that through bacteria which resemble those of the usual putrid infusions malignant pustule arises, while the bacteria of the usual putrid infusions do not cause this, then we must conclude that the bacteria of malignant pustule must be at least as different from those of infusions as hemlock from parsley.

So much for the influence of bacteria in the production of pyæmia and septicæmia. In the third and concluding portion of this article we shall examine the present state of knowledge respecting the production of other affections by the agency of the lower organisms.

CORRESPONDENCE.

NEW YORK, August 20, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DR. ERSKINE MASON, who has been especially interested in the subject of intestinal obstruction, and has performed a number of operations for its relief, recently operated in a case of carcinoma of the rectum. The fæces passed had been gradually becoming more and more attenuated, until they ceased altogether to come away, the bowel being entirely occluded. The lower portion of the cancerous mass could be felt by the finger about one and a half inches within the anus. A number of well-known surgeons were present at the operation, which was performed at Roosevelt Hospital, where Dr. Mason is one of the attending surgeons, and which was that of lumbar colotomy, for the purpose of establishing an artificial anus. The patient rallied well after it, and the procedure will, no doubt, prolong her life for some time; though the disease is steadily advancing, and has now involved the uterus to some extent.

Just at the conclusion of the operation, Prof. Alonzo Clark walked into the amphitheatre, and was politely asked by Dr. Mason if he would not like to make a digital examination of the diseased parts. The old gentleman, looking around complacently on the others present, some of whom were still lugubriously sniffing their fore-fingers, from which soap and water had been quite ineffectual in removing the disgusting odor, replied, in the driest possible manner, "No, I thank you, doctor; I am quite willing to take the word of my friends here."

The third annual report of the visiting committee for Bellevue and other public hospitals of New York to the

State Charities Aid Association, for the year ending February 1, 1875, has been published, and contains much that is interesting.

We have only time, however, to glance at a few points in the report of the committee on the Training School for Nurses at Bellevue Hospital, which is contained within the other. The school has been in operation for two years now, and seems to have more than fulfilled the expectations entertained in regard to it in the beginning. "The most conscientious and most intelligent of our nurses prove our most cheerful workers," says the report. "They fully realize that there is no such school for a wide and varied experience as just such a hospital affords. They appreciate very highly the bedside instruction kindly and constantly given by the physicians and house staff, and they know that the profession they are acquiring by persevering work in the wards will be, in their future lives, as lucrative as it is useful and womanly."

During the past year the number of wards under their charge was increased from five to nine,—now comprising three female medical, three female surgical, and three male surgical. "The fact that these four new wards," continues the report, "were urged upon our acceptance by the physicians in charge, who have watched the work of the school in the hospital from its commencement, would seem to prove their approbation of its results, and their appreciation of the difference between the services of intelligent women striving day by day to perfect themselves in a deliberately chosen profession, and the labors of the uneducated and often overworked nurses who have charge of the wards outside of the school."

The number of pupils has increased to such an extent that the house rented in Twenty-sixth Street near the hospital for the nurses' home will no longer accommodate them, and it has been found necessary to occupy a portion of the house adjoining also.

During the year one hundred and seventeen applications for admission to the school were received, either personally or through letter. "In many cases," says the committee, "the applicants fell below our standard, mentally or physically, or were prevented by domestic reasons from binding themselves to any given length of service. But generally the two years that we demand from our probationers is the stumbling-block. The thoroughness to be learned by one year's faithful work in the wards and a second year spent in training others, thus gaining the valuable experience only possible to acquire by putting knowledge to the practical test of use, counts as nothing with most American women; and it is this contentment with a superficial rather than with a thorough education that has so far proved one of our chief troubles."

Of the one hundred and seventeen applicants, twenty-nine were accepted. At the close of their month of probation, nine left,—five as entirely unfitted for the work, one as unwilling to do night duty, two for want of health, and one because she could not live apart from her family. One of the pupils who entered the

school in 1873 was dismissed, two broke their written pledges and left, and one is now superintendent of the Boston Training School.

As long as there were lying-in wards at Bellevue, the school had charge of them; but last summer, on account of the continued prevalence of puerperal fever, the obstetric service was entirely transferred to Charity Hospital.

In December, at the request of the committee, Drs. Bryan and Murray, of the house staff, held an examination of such of the women as had been in the school one year or over, and made the following report upon it: "According to request, we have examined the head nurses, asking them such questions as would give us a fair estimate of their knowledge of nursing. Supposing 100 to represent perfection, and 75 the lowest mark a nurse could have and pass, we have marked them as follows: 1, 99; 2, 98; 2, 97; 5, 95; 1, 93; 1, 90; 1, 88; 1, 85. As our marking plainly indicates, we have found them all well informed on the subject of nursing, considered theoretically; practically, we have had personal experience with all of them, and can say from actual knowledge that each one is thoroughly competent to take charge and perform all the duties of either a surgical or medical ward."

The Medical Board of Bellevue, composed of the attending physicians and surgeons, also passed a formal resolution expressing their appreciation of the improvement in the care of the sick and injured in the wards of the hospital under the "trained nurses," and their approval of the efforts of the managers of the school, in the success of which they believe that not only the hospital will be benefited, but also that facilities will be offered to the public for procuring competent private nurses. These, indeed, were the two great aims which the managers had in establishing the school: first, to make this great hospital a place where the respectable poor could be tenderly and skilfully nursed, and where even the most degraded of paupers would be sure of kindly and patient care; second, the training yearly of a band of experienced, obedient, devoted nurses for service in private cases, or among the poor.

During their second year such of the women as the superintendent can best spare from their work of training probationers are sent out to private cases, and in the year past twelve of the nurses were thus employed. In the hospital, each ward under charge of the school is worked by one head nurse, who receives sixteen dollars a month wages, and two probationers, each of whom receives ten dollars.

Since February, 1873, the school has received nearly twenty-five thousand dollars; but its annual expenses now amount to about twelve thousand dollars. During the past year the following lectures were given: "On Food for Children, and the Care of the New-Born," by Dr. Beverly Robinson; "The Eye," by Dr. R. H. Derby; "Fresh Air, Emergencies, Digestion, and Food," by Dr. Allan McL. Hamilton; "Testing Urine," by Dr. Ordronaux; "The Circulation," by Dr. Farrington; "Surgical Instruments, Preparations for Opera-

tions, Erysipelas, Gangrene, and Pyæmia," by Dr. Frank Hamilton; "Bandaging," by Dr. Brooks; "Symptoms of Disease, Puerperal Women, etc.," by Dr. Murray; and "Medicines, Inflammation, Hemorrhages, etc.," by Dr. Bryan.

At Charity Hospital a number of judicious and much-needed reforms have recently been instituted, which have been productive of great advantage to it; but a great deal still remains to be done. Thus, there are not infrequently deficiencies in bedding, clothing, medicines, instruments, appliances for nursing, and daily food, such as beef, mutton, and milk, which are attributable neither to negligence on the part of the Medical Board nor to the Warden or Chief of Staff, but to the "Medical Inspector," to whom all requisitions go, and who is vested with the privilege of cutting them down or striking them off altogether, without being required to visit the institution from which the demand comes, in order to investigate its necessities, or to state the reasons for his action either to the official making the requisition or to the Commissioners of Charities. It is claimed that a medical inspector is indispensable; but the inspector should not be an autocrat, responsible to no one, and valued solely for his skill in cutting down supplies, for his economical measures necessarily recommend themselves to his superiors, who seem to regard him as a most valuable check upon the supposed extravagance of the physicians and hospital officials.

This same false system of economy, we learn, is seen in the regulation of the water-supply. The Croton water is brought to the hospital, and the inmates are entitled by law to the use of eighty gallons a day each; but to force such an amount of water through the building would demand the use of more fuel than is authorized, and consequently there is often foul air from the closets in every ward, and the whole hospital thus tainted. Another great abuse is the necessary overcrowding of the wards at times. Thus, during last winter one ward with thirty-four beds contained forty-one patients; another, with thirty-two beds, fifty patients; and a third, with twenty-eight beds, forty-four patients.

On the 1st of August a training-school for nurses, entirely independent of that at Bellevue, though on the same general plan, was inaugurated at Charity Hospital. It is under the direction of the Commissioners of Charities and Correction, and it is the design of its originators that it shall afford a thorough course of instruction, both theoretical and practical. The age of the applicants must be between twenty and thirty-five years, and none but those of irreproachable character and sound constitution are allowed to enter. After a pupil is once admitted to the school, the attendance for the full time is compulsory, unless it should become necessary to dismiss her. The wages are to be ten dollars a month for the first year, and fifteen dollars for the second. The course of instruction is limited to two years, at the end of which time those who are found thoroughly competent will be presented with a diploma, testifying to their experience and formally qualifying them for their calling, which is to be signed by the

Medical Examining Committee and the Commissioners of Charities and Correction. During August and September lectures are to be given on "Nursing," by Dr. D. H. Kitchen; "Midwifery," by Dr. W. R. Gillette; "Physiology," by Dr. L. M. Yale; "Surgical Dressings," by Dr. J. W. Howe; "Examination of Urine," by Dr. H. G. Piffard; "Hygiene," by Dr. E. Frankel; "Care of Children," by Dr. J. H. Ripley; "Food," by Dr. Pallen; and "Poisons and Antidotes," by Dr. Drake.

In a communication on the water-supply of New York, addressed to Mayor Wickham this summer by Gen. Fitz-John Porter, Commissioner of Public Works, there is a good deal of information of importance to the public; and, as the furnishing of large cities with an abundant quantity of pure and wholesome water can never be a subject of indifference to the medical profession, perhaps it may be well to devote a little space to some of the details mentioned. The area of land which drains into the Croton River above the Croton dam, which supplies the water to this city, is about three hundred and forty square miles, which, according to the record of rainfall, will give an average daily supply of water from rain alone throughout the year of three hundred million gallons. A gauge for many years of the daily quantity of water flowing over the Croton dam, in addition to that which is conveyed into the city by the aqueduct, shows for the past ten years an average daily waste of water of three hundred and forty million gallons.

It is thus manifest that many of the large springs within the Croton basin receive their supply from sources outside of the water-shed, and that a much larger supply can be relied upon, if properly stored, than is shown by calculations from the average rainfall. The Croton Lake (the sedimentary basin of the water-supply), at the head of the aqueduct leading to this city, covers about four hundred acres, and has a storage-capacity (above a level that will allow the delivery daily of 35,000,000 gallons) of about 500,000,000 gallons; the new reservoir in Central Park, 1,000,000,000 gallons; the old reservoir in Central Park, 150,000,000 gallons; distributing reservoir in Fifth Avenue, 20,000,000 gallons: total, 1,670,000,000 gallons. Yet on the 2d of October, 1869, all of this available storage-supply was practically exhausted, and the only supply was an amount not exceeding 27,000 gallons per day, then running in the Croton River. But for the early partial closing of the valves at the reservoirs and in the city, the higher parts of New York would have been entirely without water, and the lower parts scantily supplied.

In Putnam County, at or near the sources of many of the tributaries of the river, are natural lakes, generally of great depth, the waters of which, coming from springs within their basins or near by, are remarkably pure and limpid. These afforded the only immediate means of obtaining a full and adequate supply of water for the city, and in 1870 the right to draw from a number of them was secured, and the outlets cut down.

Thus an ample supply of wholesome water was furnished to the city during the long drought of 1870, notwithstanding it was much more severe than in 1869. It is manifest that if the rains were frequent and evenly distributed throughout the year, there would be a large and constant supply of water; but the long droughts of summer and autumn, and, occasionally, the severe cold of winter, so reduce the quantity running in the river as to make it inadequate to supply the daily needs of the city.

Necessity has therefore compelled the resort to storage-reservoirs, the system of which had been commenced at Boyd's Corner as early as 1866, these reservoirs being filled during the wet season and drawn from during the dry season. The lakes, the waters of which are available in case of necessity, are Glenida, Gilead, Mahopac, Kirk, Barrett, and China, furnishing a total supply of 2,006,000,000 gallons.

Artificial Reservoirs.—Reservoir at Boyd's Corner (finished), 2,700,000,000 gallons; new reservoir on middle branch of Croton River (unfinished), 4,000,000,000 gallons.

In 1869, careful husbanding of the water in the city reservoirs alone saved a large part of the city from water famine.

In 1870, prudent forethought saved the city from stint and secured an abundant supply from the natural lakes and ponds.

In 1873, over one-thirteenth of the year's supply was drawn from three of the lakes and from Boyd's Corner Reservoir, and this draught was during the dry season, and when the daily consumption was 100,000,000 gallons.

In 1874, with a daily consumption of 102,000,000 gallons, one lake and Boyd's Corner Reservoir supplied one-nineteenth of the year's consumption.

In 1875, up to June 5, the daily consumption has averaged 107,000,000 gallons. At that date the Croton Lake was unusually low, and the reserve supply was running into it.

The daily consumption of water has been steadily increasing, year by year, as follows: Average daily consumption in 1870, 85,000,000 gallons; average daily consumption in 1871, 87,000,000; average daily consumption in 1872, 90,000,000; average daily consumption in 1873, 100,000,000; average daily consumption in 1874, 102,000,000; average for five months of 1875, 107,000,000.

The aqueduct is now used very nearly to its full capacity, and with the growth of the city, and the increased facilities for distributing water at higher elevations, the rate of consumption and waste will, no doubt, be proportionally greater each year, and soon the demand for water will exceed the capacity of the present aqueduct to deliver, and the city will be stinted in supply.

A year with the drought that occurred in 1870, with the consumption of the present time, would require a storage-capacity of 4,023,200,000 gallons.

The Chief Engineer very justly says that "it is evi-

dent that, in spite of all the restrictions that can be brought to bear against the waste of water, it will be necessary to build an additional aqueduct from Croton River to Harlem River. An abundance of water for the city's wants for many years to come can be had in the Croton Valley by establishing storage-reservoirs, for which the Croton and its branches offer many admirable sites.

"But to increase the supply of water to any considerable extent involves the construction of a new aqueduct, and I think no time should be lost in obtaining all the requisite data to locate it."

The excursions of the new floating hospital of St. John's Guild have been continued with great success; though, as the average expenses of each trip are about two hundred and fifty dollars, and they are made three times a week, it is a pretty severe drain on the treasury. About a thousand mothers and children go on every excursion, and both breakfast and dinner are always served on board. Some idea of the quantity of food consumed on these excursions may be obtained from the following list of the principal articles used on one of the ordinary trips: 611 pounds of beef, 250 loaves of bread, 3 barrels of crackers, 350 quarts of milk, 1 tub of butter, $1\frac{1}{2}$ barrels of boiled rice, $\frac{1}{2}$ barrel of sugar, 80 gallons of beef soup, and $\frac{1}{4}$ chest of Oolong tea.

Another excellent summer institution is the "Poor Children's Seaside Home," at Bath, Long Island. This has been provided by the Children's Aid Society for the pupils of the industrial schools under their care, and the location is unsurpassed for pleasant surroundings, invigorating sea air, and safe bathing-grounds. Over two hundred children are at the home every week, and it is hoped that two thousand will be able to enjoy its benefits before the season is ended. This pleasant place is only four miles from Brooklyn, and is very accessible both by cars and boat.

PERTINAX.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF NEW YORK.

STATED MEETING, MARCH 10, 1875.

DR. JANEWAY presented a specimen of *urethral calculus* from a boy four years of age. The doctor stated that when called in to see the child he found him suffering much pain from suppression of urine; not a drop had passed for two days. The bladder consequently was greatly enlarged. On opening the meatus, he noticed lodged in the urethra a small calculus, which he succeeded in extracting. The calculus was egg-shaped, three-quarters of an inch long, one-quarter inch thick, and composed of uric acid.

The doctor also presented specimens of bone obtained from the dissecting-room. The first was an impacted fracture of the neck of the femur, showing the new growth of bone around the shaft.

The second specimen was an ankylosed knee-joint, which illustrated very well the disease of bony ankylosis at the knee. The third specimen was taken from a woman aged 35, and was characterized by growths of exostosis. All of her bones were similarly affected.

Dr. MASON showed a specimen of *fracture at the base of the skull*, which was taken from a man aged 30. On admission to the Bellevue Hospital in December last, he presented the appearance of one seriously intoxicated. His breathing for a short time was stertorous. No marks of injury were found. A small clot of blood was found in the ears, but no other fluid was discharged from them. The night he came into the hospital he vomited, and three days after admission he vomited again; the matter vomited each time smelling strongly of alcohol. Five days after admission there was no material change in his condition, except that he appeared to be growing weaker, and complained of some pain in his head. On the sixth day after admission the patient became quite delirious. On the eighth day pupil of left eye more dilated than the right; both, however, responded to light. Some paralysis of left side was inferred from the fact that he could not grasp so strongly with left hand. At this time pulse 104, temperature 101° , respiration 20. On the following day, ninth after admission, all his symptoms much improved, but on the next day he for the first time gave evidence of what his real condition was by a watery discharge from his ears. Diagnosis was then made that the patient probably had fracture of the base of the skull.

On the twelfth day he became comatose, and began to pass his feces and urine involuntarily. He died on the sixteenth day after admission.

At the autopsy, twenty-four hours after death, on removing the skull-cap, the dura mater was found adherent to the bone, and the sinuses greatly distended with blood. In the middle lobe of the cerebrum on the left side there was a spot of softening two and a half inches in diameter and one inch in depth. On removing the brain an extensive fracture was noticed through the temporal and ethmoid bones.

The point of interest in this case is that the patient with such an extensive fracture in such a situation should present no symptoms of his real condition until at least ten days had passed after the injury was received.

Dr. KIPP presented a specimen of *cancerous disease of the petrous portion of the temporal bone*, taken from a woman aged 47. The specimen was referred to the microscopic committee, to be examined.

Dr. J. LEWIS SMITH said he was called, on February 27, to see a baby, at that time seven days old, which had been sick since the day previous. The family lived in a dilapidated tenement-house in the suburbs of the city. There was no difficulty in determining the nature of the disease. The child had tetanus neonatorum fully developed. A year previously, this family, then living in the same apartments, lost a child from the same disease. The only thing observed unusual in the case up to the time of tetanic symptoms was the existence of a diarrhoea, which the child had had since two days old. At the time of the doctor's visit, the spasms were occurring about every two minutes. Pulse 164, temperature $100\frac{1}{2}^{\circ}$, respiration 60. During the spasms the muscular rigidity was so great that the body could be lifted up by placing one hand under the child's head and the other under its heels.

The doctor then described the post-mortem appearances, thirty-seven hours after death, the most remarkable of which were the hyperæmic condition of the liver and the brownish discoloration of the surface of the abdomen, showing the existence of *icterus neonatorum*.

BULLET-WOUND OF THE STOMACH AND KIDNEY (*Boston Medical and Surgical Journal*, August 5, 1875).—Dr. M. E. Jones reports a case of bullet-wound of the stomach and kidney followed by hæmatemesis and hæmaturia. Morphia and gallic acid were employed, and the patient made a good recovery.

SELECTIONS.

A RAPID METHOD OF ASSAY FOR CINCHONA-BARKS.—M. Urbelin, a pharmacist of Nantes, proposes the following rapid method of assay for cinchona-barks: 10 grammes of bark reduced to a coarse powder are moistened with about 30 grammes of water of ammonia; after stirring the mixture to facilitate the penetration of the ammonia into the pores of the bark, about 30 grammes of benzole are poured upon the pasty mass. The mixture is agitated, and after a few minutes the benzole is decanted into a flask, holding about 200 c.c. This operation is renewed four or five times, or until the quinia is completely removed. Into the benzole are poured about 50 grammes of water, containing 2.5 grammes of sulphuric acid; after agitation for a few minutes, the quinia passes from its solution in the benzole into the acid, where it exists as sulphate. The acid liquid is removed from the benzole by decantation, and to it is added a quantity of ammonia-water sufficient to precipitate the quinia, which is separated by filtration, and weighed, after being carefully dried.—*The Laboratory*.

MENINGEAL SYMPTOMS PRODUCED BY QUINIA (*The Clinic*, July 31, 1875).—Dr. Cleveland relates that he was called to attend a case of remittent fever in a boy 14 years of age. He treated it in the usual manner, but, the fever persisting, increased the amount of quinia until he gave four-grain doses. The fever then subsided, but he was shortly afterwards summoned, and found the patient evidently in a state of great cerebral excitement, if not of meningitis. The orbital pains of which the boy had complained had very much increased; the circumscribed pain became a general headache. As it occurred to him that the quinia might have produced the trouble, he discontinued it. The meningeal symptoms subsided in four or five hours. The temperature of the patient had once been as high as 105° , but while in the state mentioned it did not exceed 101° . During the height of the fever the pulse was 120; in the period of cerebral excitement it fell as low as 50 beats per minute. About two scruples had been given, the greater part of it during the twelve hours preceding the development of the meningeal symptoms.

GLEANINGS FROM OUR EXCHANGES.

METASTASIS OF MUMPS TO THE TESTES AND THE BRAIN (*The Boston Medical and Surgical Journal*, June 24, 1875).—Dr. O. B. Shreve reports the case of a young man, æt. 25, who had an attack of mumps, declaring itself by headache, loss of appetite, moderate fever, slight acceleration of the pulse, and swelling of the parotid glands and the tissues in their neighborhood. Two days later he underwent exposure to cold and wet, which was followed by a high fever, with full bounding pulse, furred tongue, pupils dilated, headache, delirium, subsidence of parotid swelling, and turgescence and pain in the testes. In a few days he was perfectly rational, and was much better in every way, the pain and swelling both in the parotid region and in the testes having disappeared. He was, however, suddenly taken with raging delirium which was entirely uncontrollable; pulse 120, face and eyes congested, pupils contracted. These severe attacks were ushered in by a sudden rigidity of all the muscles of the body, and followed by distinct opisthotonos, which was succeeded by violent struggles, during which he attempted to bite, kick, or strike his attendants, and failing in this he gave utterance to the most fearful

shrieks. He became so violent, and was possessed of such great strength, that it became necessary to confine him by a strait-jacket. Bromide and chloral seemed to have no effect on him, although administered in large doses; the pulse became weak, the body was bathed with perspiration, and the patient died comatose.

QUININE AS A GARGLE (*The Practitioner*, August, 1875).—Dr. David J. Brakenridge has for four months treated all suitable cases of sore throat occurring in his practice with a gargle composed of ten grains of sulphate of quinia and five minims of dilute sulphuric acid to each ounce of water. From a considerable experience he draws the following conclusions:

Simple non-syphilitic ulcers of the throat under this treatment at once assume a healthier aspect, and heal rapidly. In syphilitic ulcers, the local treatment has always been accompanied by the internal administration of iodide of potassium or some other constitutional remedy; but the cure was apparently hastened by the quinine gargle. Its effect on the sore throat of scarlatina is very marked, the pultaceous secretion being checked and the inflammatory swelling diminished.

It is of comparatively little use in the early stage of cynanche tonsillaris, over which tincture of aconite, in minim doses frequently repeated, has so decided a control. When, however, abscess followed by abundant discharge of pus results, its beneficial influence in checking the suppuration and promoting healing is marked.

In the slighter forms of diphtheritic sore throat it answers admirably, preventing the extension of the disease and promoting the separation of the membranous exudation.

Dr. Brakenridge reports a very severe case of true diphtheria in which the gargle had a remarkably beneficial effect, and says that it is in such cases that he hopes it will prove most useful.

GELSEMINUM SEMPERVIRENS IN ODONTALGIA (*The Practitioner*, August, 1875).—Dr. James Sawyer has rarely found gelseminum fail to give decided and lasting relief in cases of neuralgic pains in the face and jaws associated with carious teeth. He usually gives every six hours fifteen minims of a tincture made in the following manner: Take of gelsemia root, in coarse powder, two ounces; of rectified spirit, twenty fluid-ounces. Moisten the powdered root with ten ounces of the spirit, and allow the mixture to stand for twenty-four hours. At the end of that time pack in a percolator, and add the remaining ten ounces of spirit. When the fluid has ceased to flow, remove the contents of the percolator and press them. Add the pressed liquid to that obtained by percolation, filter, and make up with rectified spirit to a pint. Eleven minims are equal to one grain of the root. There is only a trace of tannin in the tincture, which may be given with any of the preparations of iron.

TREATMENT OF VAGINISM (*The Practitioner*, August, 1875).—M. Bouchut observes that the spasm of the vaginal sphincter in this affection is often due to the same cause as the spasm of the anal sphincter,—a very small, painful, longitudinal fissure being detectable at the lower part of the orifice of the vagina. Forced dilatation would seem to be indicated here as in the fissure of the anus; but before having recourse in either disease to so painful a procedure, we should try simple measures, which will often prove efficacious. To this end M. Bouchut strongly recommends vaginal suppositories, formed of five parts of cacao-butter and three parts of extract of rhatany, thoroughly well incorporated. One of these is to be introduced into the vagina

night and morning, and allowed to dissolve; then a bran-bath should also be employed for an hour daily.

DAMIANA (*Pacific Medical and Surgical Journal*, July, 1875).—Dr. Charles M'Questin, having used damiana extensively in Mexico, where it is employed as a domestic medicine, bears testimony to its efficacy in cases of sexual debility or lethargy of the sexual organs. In such cases the results are all that could be desired. The leaves only of the plant are used. An infusion is made of one ounce of the dried leaves to a pint of water, and this amount is given daily. In a few days the effects are manifest. The infusion has an agreeable aromatic and slightly bitter taste. He is not prepared to state if its properties are those of an aromatic or stimulating tonic, but says that of its aphrodisiac power there can be no question.

APHASIA (*The Chicago Medical Journal*, August, 1875).—Dr. Walter Hay reports a case of aphasia following a blow upon the bridge of the nose,—the immediate sequelæ of the blow, coma and paralysis, having entirely disappeared, but the aphasic condition persisting to such an extent that his speech is limited to one word, "yes," which he articulates distinctly, but in a whisper. His general health is excellent.

In another case, the attack seemed to follow embolism of the left middle cerebral artery, from rheumatic endocarditis, the most remarkable feature being the total and instantaneous obliteration from memory of certain items of acquired knowledge previously in constant use.

CARBOLIC ACID AS A LOCAL ANÆSTHETIC (*Atlanta Medical and Surgical Journal*, July, 1875).—Dr. Eugene Foster asserts, from experience in its use, that carbolic acid is almost worthless as a local anæsthetic; that if complete anæsthesia of a part is obtained, death of the tissues to the extent of the depth of the anæsthesia almost invariably follows; that it is by no means certain to produce anæsthesia, but that it is merely an experiment in each instance in which it is used; that cicatrization of the incision is greatly retarded by the acid; and that in comparison with the ice and salt mixture, ether, or chloroform, as a local anæsthetic, it sinks into utter insignificance.

INCISION OF THE LOWER LID IN CERTAIN CASES OF CATARACT (*The Lancet*, July 31).—Mr. Solomon, in a case of cataract where the eye was so deep-set as to interfere with the section of the cornea during the operation of extraction, simply made a perpendicular incision through the substance of the lower lid of about three-eighths of an inch in length and one-sixth of an inch from the commissure. The front of the eye was now easy of access, and the operation was performed. The tarsal wound was entirely healed on the fourteenth day.

XANTHIUM STRUMARIUM (*The American Medical Journal*, July, 1875).—Dr. William Fulton reports the xanthium strumarium, or common cockle-bur, as one of the most reliable of diuretics. He has found it a specific in all cases of urinary difficulties in pregnancy, and prescribes it in all cases where there is scalding in urinating. He uses it in the form of a tea, or as a saturated tincture, of which he adds about two drachms to a tumbler of water, and gives one tablespoonful every two or three hours.

NECROMETER.—Bouchut found by examination of 1100 men (living, dead, and in a trance) that no corpse has a higher temperature than 20° Cent. (68° Fahr.). He constructed a thermometer (alcohol) in such a way that the alcohol does not become visible before 20° Cent. has been reached. Even a child will be able to tell whether life be extinct or not.—*Am. Jour. Phar.*, July, 1875; from *Arch. f. Pharm.*, May, 1875.

CAUSE OF URETHRAL STRICTURE (*New York Medical Journal*, August, 1875).—M. Oudenhoven, chief health officer of the Dutch marine, has observed that among the Japanese, Malays, and Chinese strictures are very rare, notwithstanding the frequency of blennorrhagia, and he attributes this fact to their peculiar form of dress, which necessitates the performance of micturition in the sitting posture, a position which diminishes the curve of the urethra and frees the genitals and urethral canal from all compression. Among Europeans, on the contrary, the pantaloons cause an augmentation of the curvature and a compression of the canal; micturition, therefore, requires more effort, and the urine produces more friction of the urethral walls; the epithelium is eroded, the inflammation is deeper, and granulation-tissue forms. Oudenhoven, therefore, recommends that all patients with urethritis should be advised to urinate while in the sitting posture.

MISCELLANY.

HOMŒOPATHIC HOSPITAL.—It is reported in the daily papers that the Commissioners of Public Charities and Correction voted, on the 7th [ult.], to place the building heretofore used as an Inebriate Asylum on Ward's Island, under the charge of homœopathic physicians and surgeons, to be used as a general hospital. The following preamble and resolutions were passed accordingly:

"Whereas, More than six months ago an appeal was made to the Board by six hundred and fifty-five citizens and tax-payers to designate an hospital to be under the care of homœopathic physicians; and,

"Whereas, The resolution of this Board, passed February 13, conditionally assigning the Riverside Hospital for the purpose, has proved inoperative by reason of the continued occupancy of that building by the Board of Health; therefore,

"Resolved, That that portion of the Inebriate Asylum on Ward's Island made vacant by the distribution of the soldiers to national homes be set apart for a hospital, to be under the care of homœopathic physicians, under such rules and regulations as the Commissioners of Public Charities and Correction may establish.

"Resolved, That the Committee of the Homœopathic Society, whose petition in this behalf bears date July 3, 1875, and was followed by a personal interview with the Commissioners on the 13th of July, be notified of this action of the Board, and requested to make such suggestions and recommendations as may seem to them calculated to promote the object in view."—*The Medical Record*.

SAD AFFLICTION.—A London physician has a case without precedent, the cause of which he is unable to discover, and which baffles all his skill. Naturally he writes to the *Lancet* about it. The case is this, as he states it:

"Mrs. J—, aged thirty-five, with a large family, suffers from a spasmodic affection of the lower jaw. It will, without any warning whatever, become fixed, so that with all my strength I could not open it. The hus-

band is the only one who can do so; and I have seen him perspire before he succeeded."

The physician says he has tried everything he can think of, both internally and externally, but all in vain. It is a very remarkable case; one of the most remarkable we ever heard of. There have been cases, we are told, quite the reverse of this, as, for instance, when a woman "with a large family" has "a spasmodic affection of the lower jaw," which, "without any warning whatever," becomes unfixed and vibratory, so that the strength of the whole family cannot shut it or stop it, and even the husband, perspire he never so freely, is compelled to flee before it. We do not, of course, profess to be able to prescribe for the London patient, but would it not be possible to make a "swap" of the two spasmodic affections? There are, no doubt, many men who would be willing to exchange the spasmodic affection which unfixes the wife's lower jaw for Mrs. J.'s disease, which fixes it. Doubtless, too, there are husbands who, if their wives were overtaken by a spasmodic affection fixing the lower jaw so that it could not be opened without perspiration, would never sweat again. —*Druggist's Journal*.

In a letter dated Vienna, July 24, 1875, the writer speaks as follows of a recent operation for ovariectomy:

"Billroth's last case, operated on just a week ago, was one of the most difficult and most unpleasant an operator could well meet, the adhesions being far greater than had been anticipated. Omentum, intestines, ovaries, and uterus were so bound together that a great part of the peritoneum was torn away in efforts made to disengage the tumor, which proved to be a multilocular cyst. The adhesions in the pelvis were so numerous that the uterus could not be found, and no drainage-tube could be used to any advantage. The tumor appeared to be nourished not through any distinct pedicle, but through its numerous adhesions, which gave rise to a hemorrhage which was very difficult to control. It was finally stopped by numerous ligatures, all of which were left in the abdominal cavity. As might be supposed, the patient died—in forty-eight hours."

A PHYSICIAN'S certificate, lately presented to an agent of the Southern Express Company, with a corpse for transportation, read as follows:

"I hereby certify that this corps, a daughter of —, died of croup. —, M.D.

"MAY 10, 1875."

If this physician cannot write Latin better than he can write English, we shouldn't like to take a mixture compounded from any prescription of his.—*The Sanitarian*.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 24, 1875, TO AUGUST 30, 1875, INCLUSIVE.

HALL, J. D., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Brown, to comply with par. 3, S. O. 135, c. 5., War Department. S. O. 146, c. 5., Department of Dakota.

BROWN, P. R., ASSISTANT-SURGEON.—Assigned to duty at Fort Shaw, M. T. S. O. 146, c. 5., Department of Dakota.

SATURDAY, SEPTEMBER 11, 1875.

ORIGINAL COMMUNICATIONS.

ON MEMBRANOUS CROUP AND ITS TREATMENT.

BY BEDFORD BROWN, M.D.,

Alexandria, Va.

SETTING aside all theories in regard to the specific character of croup as unsustained either by arguments or by facts, those pathological processes combining to complete the disease known as membranous croup comprise, primarily, engorgement; secondarily, inflammation; and, lastly, exudation on the mucous membrane of the larynx and trachea; or, rather, the destruction and sloughing or exfoliation of the involved epithelium, and then the membranous exudation. This process of epithelial exfoliation is truly one of the most important of all those elements entering into the formation of the disease. Without this preliminary arrangement it would not be possible for the last and most important stage—that of exudation—to occur.

Hence, when the destruction and exfoliation of the epithelial coat have taken place, the basement membrane underneath is laid bare; it can no longer secrete mucus, but becomes the theatre of those important actions consisting in the exudation of plastic material from the exposed vessels, which rapidly assumes the form and consistency of membranes.

Not in all, but in a very large proportion of the cases of tonsillitis coming under our observation, in greater or less degree these identical processes occur and may be observed at any time.

In such cases the affected tonsil first becomes engorged, then highly inflamed, then one or more white or gray patches, sometimes larger than a shilling, appear on its surface. These may disappear and reappear several times before resolution. These cases are usually denominated ulcerative, and, at other times, diphtheritic. In reality they are neither, but of a true exudative character with an innocent type of disease. If such exudations were situated in the larynx or trachea, they would then become matters of infinite moment. In tonsillitis of this character, until the inflammatory action subsides, we may observe this membranous exudation, though removed by local applications, return every day. Its removal is usually followed by bleeding.

The same destruction and exfoliation of the epithelial coat occur here as in membranous croup. Thus, while the epithelial coat exists in its perfection with unimpaired functions, there can be no membranous formation. This fact is one of paramount importance in the pathological history of croup and its therapeutic management.

Bearing on this point there is another pathological question of infinite importance. It is whether membranous croup is a simple inflammatory affection, or a specific disease. Universal experience in the profession unites in establishing the opinion that by appropriate treatment the exudation may be

prevented. Hence the conclusion that this form of croup is a simple form of inflammation. Under intense inflammation, the epithelium ceases to perform its function of secreting mucus. There is an utter suspension of action, and consequently a complete absence of all moisture on the epithelial surface. There is no relief of the engorgement and blood-stasis, and this delicate coat sloughs, leaving the basement membrane denuded, with its injected vessels laden with plastic blood, when exudation results. In simple tonsillitis with limited exudation we have ocular demonstration of the fact that this exudation, when left undisturbed, continues to grow in proportion to the area of the destruction of the epithelium, and also of the fact that during a high state of inflammatory action the epithelial coat so destroyed cannot be repaired until resolution begins. Hence the successive crops of exudation in membranous croup, diphtheria, and tonsillitis, while inflammation continues.

It would appear that in all local affections of an exudative character, morbid action must reach a certain point, must pass only through certain stages, and must be surrounded with favorable circumstances, to complete the process of exudation. When this process is interrupted, either the normal secretion of the part affected takes its place, or purulent formation is substituted. Thus, in the case of incised wounds, the adhesive or plastic form of inflammation is often through slight influences converted into the purulent. In serous inflammations, also, the adhesive may be exchanged for the purulent or serous products either by local or by general influences. In membranous croup we desire to convert the plastic form of the inflammatory products into the mucous before exudation has taken place, and, if possible, into the purulent after that has occurred. Thus, if the epithelial cells coating the inflamed surface should be made to pour out their peculiar secretion there can be no plastic exudation, and these delicate bodies are saved from destruction.

Treatment of the Inflammatory Stage.—Whatever agents will cause a free secretion of mucus in this stage of croup, will prove the best means of preventing the last or exudative stage.

Iodide of potassium is unquestionably one of the most prompt and certain stimulants of the mucous secretion in our possession. With this valuable property it combines an alterative power over inflammations of mucous membranes, which gives it peculiar adaptation to the treatment of the inflammatory stages of this affection. The object in using it is to cause the mucous membrane of the bronchial system to pour out its secretions copiously, with a view of saving the epithelial coat from being destroyed, and preventing exudation. So long as the fever and inflammation are active, the cough clear and metallic in character, the voice hoarse, the iodide may be used energetically and freely. This remedy, to be of service in this disease, must be used in heroic doses, repeated at intervals of one or two hours. Time is a precious consideration in the treatment of croup, and to insure success the system

must be saturated with the drug as speedily as possible. The remarkable sedative influence exerted by this preparation over inflammations of the respiratory tract gives it additional value in the treatment of croup. Its sedative power in the turbulent and labored respiration of asthma and emphysema, in dry catarrh, and in kindred affections, is unequalled by that of any other drug for permanent effect. In addition to this, it is especially adapted to the respiratory diseases of childhood. The action of iodide of potassium over the respiratory tract begins with the Schneiderian membrane, and embraces the mucous surface of the mouth, the entire glandular system pertaining to salivation, the pharynx, larynx, trachea, and bronchial membrane. The normal secretions peculiar to all these surfaces are greatly augmented by its agency. Indeed, its remarkable powers as an expectorant are far from being understood or appreciated.

In the inflammatory stages of croup it may be advantageously combined with the bicarbonate and bromide of potassium, and glycerin, which latter has valuable expectorant properties.

The following formula is adapted to a child of five years of age:

R Potass. iodid., ℥ss;
Potass. bicarb., ℥ij;
Potass. bromid., ℥i;
Aquæ, ℥ij;
Glycerinæ, ℥i.—M.

Sig.—Dessertspoonful every hour.

Under the free and energetic use of the iodide in these affections, either alone or in the above combination, when the system is fully saturated with the drug the quantity of salivary and mucous secretion poured forth is sometimes astounding. This is true of croupal, tonsillitic, and catarrhal affections. In cases of tonsillitis with intense injection and tension of mucous surface, and attended with great dryness and want of moisture, the iodide will usually stimulate free secretion from the fauces, to the infinite relief of the local affection.

In a considerable proportion of the cases treated by the iodide of potassium in large doses, there was free and copious salivation, but without any of the peculiar inflammation of the salivary glands resulting from the use of mercury.

The following cases are presented as examples of the treatment of croup by this method.

Case I.—A boy of six years had been very hoarse with fever and croupy cough for several days. When visited, he was suffering from intense hoarseness, genuine metallic cough, labored breathing, and restlessness. The tonsils were inflamed, and presented exudation on their surfaces. This patient took four grains of iodide and five grains of bicarbonate of potassium, dissolved in one teaspoonful of glycerin and a tablespoonful of water every two hours. In twelve or fifteen hours the symptoms were all diminished in violence. In twenty-four hours there were copious salivation and free secretion of mucus from the bronchial surface. The exudation on the tonsils soon disappeared, and the patient, after expectorating small portions of membrane, made a rapid recovery.

Case II.—This was a young and very robust boy of three years. After a preliminary hoarse cough, with feverishness for two or three days, the formal attack of croup set in with very alarming symptoms. The same prescription was resorted to in this as in the former case, only in diminished proportion, with similar results.

Treatment of the Exudative Stage.—After exudation has been fully established a different system of treatment becomes necessary.

The tincture of the chloride of iron, combined with the chloride of ammonium and chlorate of potassium, are the only general reliable means in this stage. They act best when dissolved in glycerin and water. Glycerin is always a valuable agent in croup, as it is one of the few articles which invite moisture to the inflamed surface in the form of sero-mucous secretion.

Thus, when the symptoms of orthopnoea become more permanent, and the fever declines without corresponding improvement, this treatment should be instituted vigorously and without delay. The system must be saturated with the remedies as rapidly as possible; consequently they should be given every hour.

The following case is reported as an example of the effects of this treatment.

Case III.—This was a healthy child of fifteen months. When first visited, it had been suffering with a dangerous attack of croup for two days. There was fever, with great acceleration of pulse, entire suppression of cough and voice, with inability to cry. The respiration was painfully labored, with frequent paroxysms of difficult respiration. After a vain trial of the potash treatment, the following prescription was administered every hour:

R Tinct. ferri chlor., ℥i;
Ammonii chloridi, ℥iss;
Potass. chlorat., ℥ij;
Glycerin., ℥ss;
Aquæ, ℥iss.—M.

Dose, one teaspoonful.

In connection with stimulants and nourishment, this treatment was continued with favorable results.

The chloride of iron is not given here, as in diphtheria and its kindred diseases, as a corrective of blood-poisoning, but for its remarkable influence over local disease of a diffuse inflammatory character attended with either exudation, effusion, or extravasation. When absorbed into the circulation in sufficient quantity, it exerts a marked influence on the capillary vessels in the remotest part of the system, contracting their calibre, reducing dilatation, correcting engorgement, and arresting exudation.

THE USE OF BATHS IN THE SUMMER-COMPLAINT OF CHILDREN.

BY J. G. THOMAS, M.D.,

Savannah, Georgia.

I HAVE just read with interest a communication in the *Medical Times* of July 17, by Dr. C. G. Comegys, on the use of water in the "summer-complaint" of children when it is accompanied

by fever. In the variety of this disease which he so accurately describes as entero-colitis we perhaps always have more or less fever.

I desire simply to add my humble testimony to what Dr. C. says so far as the treatment by water is concerned; and of course the use of water as here proposed is only auxiliary to other means.

This disease has been almost epidemic with us this summer, and accompanied with more persistent and obstinate fever than I have ever before known it.

The treatment alone by internal means has been very unsatisfactory; in fact, with me it has always been so in a certain percentage of the cases, for the reason that it is oftentimes impossible to get medicines to remain on the stomach.

In the cases coming under my observation the temperature ranged from 101° to 105° ; and it was those of a very high degree of fever that caused me to get in the habit of using what I call the *reduction* treatment by cold water; and I now employ it in all cases of any fever, varying the temperature by the temperature of the patient. Usually by placing a little patient with fever of 102° to 103° or 104° , in water of temperature 70° to 85° for twenty or thirty minutes, the heat will run down to the normal point or below it, and the child will go quietly to sleep, and wake up in an hour or two, much improved. In families where I have used this for the first time, like Dr. C., I have found it prudent to stay for an hour or two and see the treatment properly carried out, for many nurses and mothers will at first be afraid of it, but they will soon get over all this fear when they observe the charming effect it has upon the child. The plan I have pursued is a little different from that described by Dr. C., and I will briefly explain it, for I am persuaded that it is not so much employed as it should be, although it is so simple and so easily practised by any one.

I first take the temperature of the child before it goes in the bath, and then the temperature of the bath, and, as a rule, have the child put into the water at the supposed temperature at which it is in the habit of bathing. But some children are very nervous about going into water: with such as these we should be very deliberate, and should allow them to get accustomed to it. They should be put into water a little above tepid, to which colder water should be gradually added until the temperature is reduced to 75° ; or, when the fever is very hot, and does not yield readily, to 70° . In many cases the child will scream a short time, but if they are properly managed their cries soon cease, and they wake up an hour after they are taken out, much improved; whereas before, they were unable to sleep for the nervous twitchings and threatenings towards convulsions. The child, after it has been in the bath for from twenty minutes to half an hour, should be taken out, the axillary region dried with a soft towel, and its temperature taken. If we find the heat has gone down to the normal degree or a little below, the child should be wrapped in a light woollen blanket and put in its bed, when, as said above, it will almost invariably sleep for some time. But in one hour its temperature should be taken again, and if it has gone up, the same process should

be gone over. Thus I have kept it up in some persistent and severe cases for days, making the child comfortable, and giving time for the effect of other controlling remedies.

In some cases the fever once reduced in this way will not return for four, five, six, or twelve hours, whilst in others it does not return at all; and in all the baths control the heat so as to make the case one of much less gravity, provided they be properly and persistently used.

I have persuaded myself, since the introduction of the clinical thermometer into use, that heat in the blood sometimes causes convulsions, and that there are many cases in scarlatina, for instance, as well as other diseases, which have died from the effect of heat upon the globules of the blood, which we are in the habit of attributing to the effect of poison of the disease. This conclusion of course is founded alone upon clinical observation, without any pathological investigation.

But I only set out to confirm the experience of your contributor, Dr. C., in the use of baths in this very troublesome and fatal complaint of children; and I feel sure that if it is practised early, with the aid of the thermometer, many little innocents may be saved who now find an early grave.

I have also tried the same reduction treatment in a few cases of malarial fever this season in adults; in these it has acted in the same happy way.

There are scattering cases reported in the journals where it has been tried in rheumatism, scarlatina, etc., with high degrees of temperature, in all of which I propose to try it in future, particularly in scarlatina where the eruption does not appear upon the surface as it should, and the temperature of the patient ranges high.

A SECOND CASE OF RUPTURE OF THE INTESTINES, FOLLOWED BY PERITONITIS, AND DEATH IN THIRTY HOURS.

BY G. WINFIELD ZEIGLER, M.D.,

Resident Physician at the Episcopal Hospital.

MICHAEL O., æt. 65, married, laborer, was admitted into the surgical ward of the Episcopal Hospital about 10 o'clock on the morning of August 9, 1875, presenting the following history and symptoms.

The officer who brought him stated that the injury, which was caused by severe kicks upon the scrotum and lower part of the abdomen by a man with whom he was quarrelling, occurred two hours before admission.

When I first saw him, he was intoxicated, and unable to answer any questions. His thighs were flexed upon his abdomen, and with one hand he supported his scrotum.

He complained of very severe pain. After transferring him to a bed, I could not detect any external marks of violence excepting a contusion upon the lower part of his scrotum. His abdomen was tympanitic, and very painful upon pressure, more particularly upon the lower and right side. The

scrotum was very much swollen and extremely painful. His pulse was full and rapid; respirations hurried and labored; tongue coated, and skin clammy.

His bladder was empty, and an instrument could be passed without difficulty. He stated that his bowels had been moved a short time previous to the reception of the injury.

The treatment which was ordered consisted in the administration of twenty minims of laudanum, the application of cold to the head, and repeated warm mush-poultices to the abdomen, with an evaporating lotion of lead-water and laudanum to the scrotum.

The thighs were flexed by means of pillows placed under the knees. He was very thirsty, for which milk was ordered.

At 1 o'clock his condition had improved somewhat. The pain was less severe, and his mind clearer. He was now ordered three grains of Dover's powder, to be taken every four hours.

At 6 o'clock P.M. his condition was less favorable, as he began to vomit a thin, frothy matter. Lime-water was now added to the milk, which at first allayed the irritability of his stomach.

At 10.30 P.M. the vomiting had increased, and was tainted with bilious matter. He manifested symptoms of approaching delirium tremens, for which he was ordered twenty-five grains of potass. bromid., to be repeated if necessary. This, however, seemed to quiet him, and he slept for short periods.

At 7 o'clock A.M. next morning he was much worse; the vomiting having kept up more or less through the entire night. His abdomen was tense and highly tympanitic, and the swelling about the scrotum largely increased.

At 10 o'clock peritonitis was fairly developed.

At 1 o'clock his condition was growing much lower, when he was ordered five grains of ammon. carb., to be taken every two hours.

About one hour later, upon being called in haste to the patient, I found him dead when I reached the ward. Immediately prior to dissolution, he ejected large quantities of bilious, with some stercoaceous, matter.

The post-mortem was made twenty hours after death. Decomposition had already set in. No external marks of violence could be found except the contusion upon the scrotum observed during life. The scrotum was very much swollen.

The abdomen was very tympanitic and much distended. Upon section, diffuse peritonitis was found.

The cavity was filled with a yellow offensive fluid, mixed with fecal matter.

The intestines were in a high state of congestion, and in the lower third of the ileum there were discovered *two ruptures*, the larger one being about one inch, and the smaller one-fifth of an inch, in length.

The parts of the gut immediately surrounding, to the extent of several inches, were in a gangrenous condition. The other abdominal organs were in a normal state.

The lungs were apparently healthy, the right one being firmly bound down by old pleuritic adhesions.

The heart was enlarged, thin, and very flabby, with slight ossification and thickening of the semilunar valves.

The scrotal cavity was distended with gas; right testicle very much contused, and filled by bloody extravasation. The left testicle was also contused, but not so extensively injured as the right one.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY COLLEGE HOSPITAL, LONDON.

SERVICE OF MR. ERICHSEN.

Reported by JOHN B. ROBERTS, M.D.

EXCISION OF THE TONGUE FOR THE REMOVAL OF CARCINOMATOUS DISEASE.

THIS man, apparently about sixty years of age, comes to the hospital to be treated for cancer of the tongue. The malignant disease, involving the middle and posterior portions of the member, extends farther back on the right side than on the left; and on the former side there exists a deep ulcer, from which hemorrhage has occurred, so copious as to be only arrested by the application of perchloride of iron.

The great pain which the patient suffers, the presence of noxious discharges which come from the seat of disease, and the certainty of the recurrence of hemorrhage until the man sinks exhausted, are good reasons for the performance of excision of the tongue, which will not only render him far more comfortable, but will, in addition, add to the time which he can survive before the disease proves fatal. Furthermore, the submaxillary lymphatic glands show no signs of carcinomatous involvement, which is still another argument in favor of giving the patient the temporary benefit of this severe operation.

The operation shall be done by cutting through the lip and mylo-hyoid space, then sawing through the symphysis of the lower jaw, and removing the tongue from the hyoid bone by means of the galvanic écraseur.

The patient is now fully under the anæsthetic effect of the chloroform, and the incision is made in the median line of the lower lip, extending under the chin to the hyoid bone. It is necessary to secure some little arteries before proceeding; but now after they have been tied, and one of the teeth extracted, a narrow saw is applied to the lower jaw, and the bone carefully divided in the middle. The next step is to cleanse the mouth and fauces of blood by means of these pieces of sponge tied on the end of a stick. Then the assistants pull the tongue forwards with a pair of forceps, and hold the mouth widely open in order that the wire of the écraseur may be placed as far back as possible and thus encircle the whole mass of disease. The current from a nitric-acid battery of eight small cells is now passed along the platinum wire, which begins to sear its way through the tissues, and which is tightened from time to time until in a few minutes the tongue is entirely separated from its attachments. There is a little bleeding, however, which must be arrested, but this is speedily accomplished by taking a piece of ice in the forceps and holding it against the bleeding points.

By examination, it is found that the growth extended farther back on the right side than was expected, and that it has not been so completely excised as on the left.

No additional operation would be advisable, however, and the edges of the labial wound shall be brought together by ordinary hare-lip sutures.

In the course of a few days the teeth shall be wired in order to hold the sawn surfaces of the bone in apposition, and thus promote the occurrence of a ligamentous union between them, which will be sufficiently strong, since the patient will never masticate any hard substances. Osseous union might be obtained by drilling and wiring the jaw itself, but the operation would be a tedious one for the man to undergo, and would be unnecessary, since ligamentous union will answer all his requirements.

TRANSLATIONS.

PHOSPHORUS-NECROSIS.—Dr. A. Haas has recently written a memoir on this subject, from an abstract of which contained in *Le Mouvement Médical*, July 24, we take the following:

"Necrosis of the maxillary bones from phosphorus was first mentioned by Lorinser, of Vienna, in 1845. Its existence was soon denied; M. Dupasquier, among others, asserting that the symptoms described were due to arsenic. The growth of the match industry soon afforded numerous opportunities for investigation, and the existence of such an affection was soon placed beyond doubt. The method of its production, however, is still a matter of conjecture.

"A peculiar circumstance, and one which is difficult to explain, is that while the regular match-makers are attacked by the disease in all its malignity, yet the workmen employed in the manufacture of phosphorus itself, although their breath may become so saturated as to be luminous, and those occupied with the red or amorphous phosphorus, enjoy entire immunity from the effects of this poison.

"It has been asserted that the acids of phosphorus dissolved by the saliva penetrate the gums, and by contact with the periosteum and the bone afford an opportunity for the production of necrosis. This theory would account for the immunity of those classes of workers in phosphorus above mentioned, who are only exposed to the vapors of phosphuretted hydrogen, and not, as in the case of the match-makers, to the vapors of oxidized phosphorus. This theory of the local action of phosphorus was maintained by Strohl, while Lorinser and others maintained a general toxic effect brought about by exposure to the poison.

"Experiment has shown that the prolonged administration of phosphorus produces thickening of the periosteum, exaggerated formation of compact tissues, and diminution in the medullary spaces. The action of phosphorus on the exposed periosteum gives rise to periostitis.

"It is known that the bones themselves contain a high percentage of phosphorus. It is, therefore, easy to imagine that under the influence of a dyscrasia produced by the absorption of a toxic substance, the economy, losing in part its faculty for selection, assimilates an exaggerated proportion of bony material with which it is saturated. In this way the formation of osteophytes and that peculiar condensation of the bony substance so often observed can be explained, and as a result of this condensation occur obliteration of the nutritive canals and consequent necrosis.

"The theory of general toxic influence will not explain, however, the peculiar preference shown by the poison for the bones of the face. These bones are the first to ossify during foetal life, and are, besides, the best and most actively nourished of the whole body.

"The affection usually begins by periostitis, followed

by the formation of abscesses, and of fistulae at the bottom of which a black sequestrum is found. Sometimes the disease invades the maxilla alone; at other times it may progress step by step until all the bones of the face, and even those of the cranium, are invaded.

"It is generally agreed that surgical treatment is called for in removing the dead bone; at what period, however, the operation should be performed does not seem to be decided. M. Haas believes that since the special character of this necrosis is propagation, the operative procedure should be instituted at an early date. In support of his ideas, and in illustration of the disease in general, M. Haas gives the notes of a number of cases, and ends his memoir by the following conclusions:

"I. Necrosis of the maxillae occurs in workmen in match-factories. It is a necrosis of a specific nature, distinguished by its tendency to propagation.

"II. The expectant plan can and ought to be pursued at the beginning of the disease, because it sometimes terminates rapidly and spontaneously by elimination of the necrosed parts. Treatment is generally unavailing.

"III. When the necrosis shows no sign of self-limitation, when the patient is becoming weakened by the excessive and long-continued suppuration, the indication is for partial or entire resection of the maxilla. As a general rule, however, it is better to disarticulate the entire maxilla when any considerable portion is involved, in order to put an effectual stop to the progress of the disease. This operation is justifiable both on account of its slight gravity and the inconsiderable deformity consequent." X.

PALUSTRAL MELANÆMIA CONSIDERED AS A PROOF OF THE MIGRATION OF LEUCOCYTES THROUGH THE WALLS OF THE VESSELS.—Dr. Léon Colin, Professor at the Val-de-Grâce, read the following communication at a recent meeting of the Société de Biologie.

In palustral intoxication there are reckoned as the principal anatomical lesions: 1. On the one hand, a more or less considerable accumulation of pigment in the splenic pulp; 2, on the other hand, pigmentary deposits in different tissues, especially in those which are most closely in contact with the blood, in the vascular sheaths. These deposits are more common and more abundant along the course of the capillaries of small calibre, like those of the brain, in which the melanic granulations are submitted to prolonged stasis due to the obstacles which they themselves cause in the circulation. The pigment thus deposited in the vascular and perivascular tissues is as black as that which is found in the blood and in the spleen. Dr. Colin does not believe these deposits to be the result of transformation *in situ* of hematin, of the coloring-matter of the red globules. If these deposits did result from such a transformation, intermediate degrees of coloration would be observed in cases examined during the earlier stages of intoxication. Such, however, is not the case. The migration of the pigmentary granules enclosed in the circulatory current appears to take place through the vascular walls; but does this take place by a simple penetration of melanic granules without any vehicle? There exist, according to Colin, active intermediaries in this migration. These are the leucocytes, which, as is known, seize and retain foreign bodies with which they come in contact, and which, thanks to their amoeboid movements, may then penetrate the vascular walls and spread among the tissues. The leucocytes charged with pigment traverse, then, the vascular walls, and when after this passage they themselves disappear in the tissues in order to play their part in nutrition, they abandon the melanic matter with which they had been impregnated in the blood in the neighborhood of the

vascular walls. In a word, this affection proves much more than those experiments in which, by artificially inflaming the walls of the vessels, local migrations of leucocytes are obtained, migrations which are so abundant as to constitute perivascular purulent collections. It proves that the migration of the white globules is accomplished in the normal condition, without alteration of the vascular walls and above all the circulatory arborescence; and there is perceived a proof long looked for, that of the intimate communication of the solid elements of the blood with the various tissues.—*Gaz. Méd. de Paris*, No. 31, 1875. X.

APHASIA.—From an analysis of a recent thesis by A. Legroux, in the *Archives Générales* for July, we extract the following: Aphasia is characterized by the diminution or perversion of the normal faculty of expressing ideas by conventional signs or of comprehending these signs, in spite of the persistence of a certain degree of intelligence, and in spite of the integrity of the nervous and muscular sensory apparatus which serve for the expression or perception of these signs. Aphasia is of variable intensity; it may affect at the same time all the methods of language with a different degree for each of them; more frequently it attacks only one. Patients may be aphasic of speech, of writing, of reading, of gesture, or may be deprived of one of these faculties only. Aphasia is generally complete and sudden; it only exceptionally becomes progressively developed. This accident may have an acute or chronic course, may be permanent or transitory; there are aphasias which last only a few hours or a few days. Such are those of the hysterical, epileptic, or neuralgic. The most frequent cause of this accident is softening of the brain. The seat of the lesions resulting in aphasia is ordinarily in the anterior lobes of the brain, almost always in the left anterior lobe, and sometimes, probably, as a result of some functional anomaly, in the right anterior lobe; most usually the alteration affects the posterior portion of the third frontal convolution on the right side. In those instances of transitory aphasia without paralysis, it has been thought that a simple congestion might cause the perversion of language. X.

ACTION OF IRON ON NUTRITION.—Rabuteau (*Centralblatt f. Chirurgie*; from *Comptes-Rendus*, t. 80, p. 1169) has carried out a series of researches in his own person relative to the effect of iron upon tissue-change.

Each series of experiments extended over fifteen days, during which he took the same sort of nourishment, exercise, etc. During the first five days the daily excretion was exactly determined. From the sixth to the tenth day, then, two grains of chloride of iron were taken daily, the observations being continued, and during the last five days the estimation of iron excreted was included.

It appeared that the amount of urine was unchanged, its acidity was decidedly increased, during the administration of the iron. This fact is sufficient to justify the use of ferruginous preparations in cases of phosphatic urine, lithiasis and oxaluria, and to place in a correct light the favorable results observed from the iron treatment in such cases. The amount of solids and the urea in the urine were increased about ten per cent.; it thus appears that the administration of chloride of iron even in moderate doses increases tissue-change not inconsiderably. Rabuteau alludes to the rise of body temperature observed by Pourowski while taking iron, indicating increased oxidation, which is also indicated by the increase in urea. X.

COMPLETE LUXATION OF THE ASTRAGALUS (*La France Médicale*, August 7, 1875).—Dr. A. Rigal reports the case of a young man who fell in a ditch, the left foot receiving the weight of the body while extended

upon the leg. On the dorsum of the foot, in advance of the malleoli, there was a tumor which was easily recognized as the astragalus, whilst in the place normally occupied by that bone there was a depression very sensitive and painful to the touch. According to the author, the mechanism of this luxation was as follows. In consequence of the weight of the body coming suddenly upon the foot, there was an exaggeration of the normal arch of the latter under the influence of two forces which act normally in reverse directions upon the extremities of the toes and the heels. At the same time there was a twisting of the astragalo-scapoid articulation, and depression of the articular surfaces, followed by propulsion of the astragalus from behind by the tibio-fibular "mortise" in the exaggerated movement of extension upon the leg. After the rupture of the ligament the astragalus was forced from its cavity like the stone of a cherry pressed between the fingers. In order to effect reduction, an assistant, taking the malleoli as a point of resistance, applied his thumbs vigorously to the head of the astragalus, and endeavored to thrust it downwards and backwards, while M. Rigal carried the foot upwards and outwards. At the second attempt the bone re-entered abruptly, and two months later the patient had entirely recovered.

In ninety-three reported cases of complete luxation of the astragalus, not compound, this was only the twenty-seventh time that reduction had been effected.

J. W. W.

THE POISONOUS PROPERTIES OF A SERIES OF ALCOHOLS (*La France Médicale*, August 4, 1875).—At a recent meeting of the Académie des Sciences, MM. Dujardin-Beaumetz and Audigé reported the results of a series of experiments on some of the alcohols produced by fermentation, including ethylic, propylic, butylic, and amylic alcohol:

1. The toxic properties of this series follow mathematically their atomic composition; whenever the latter is represented by high numbers, the poisonous action is marked, and this is the case whether the alcohol has been introduced through the skin or by the stomach.

2. For the same alcohol, the toxic effect is greater when it has been given by the stomach than when it has been administered through the skin. In the latter case, however, the dilution of the alcohol augments its action.

3. The poisonous phenomena observed appear to be the same in general, except the degree of intensity, whichever alcohol be employed.

The lesions produced also follow an increasing order from ethylic to amylic alcohol. The disturbances of the intestinal mucous membrane are all as intense when the alcohol has been given hypodermically as when it was given by the mouth. With the same alcohol, pulmonary congestion and apoplexy were more frequent when it had been given by the stomach.

J. W. W.

SULPHURIC ETHER IN THE TREATMENT OF STRANGULATED HERNIA (*Bull. Gén. de Thérap.*, July 30, 1875).

—Dr. F. Alessandri has observed six cases of strangulated hernia in which the use of ether was attended with excellent results. The patients were in great pain, nauseated, vomiting, and with complete obstruction of the bowels, the hernias being entirely irreducible. They were given a little ether by inhalation, an injection of a decoction of chamomile containing a few drops of ether was administered, and, at the same time, compresses soaked in ether were applied over the hernia. Following this treatment in each case there was an escape of gas from the bowels, and it was then found possible to reduce the hernia. From these experiences Dr. A. has been led to administer etherized injections in the meteorism of typhoid fever, and with very excellent results.

J. W. W.

ESCAPE OF PERITONEAL EXUDATION AT THE UMBILICUS (Baizeau: *Arch. Gén. de Méd.*, 1875).—Baizeau has observed two cases of recovery from purulent peritonitis in which there was spontaneous escape of pus at the navel, one of which is particularly remarkable owing to its long duration and the many serious complications by which it was attended. The patient was a boy aged 12 years, who was attacked with peritonitis in February, 1868, and in the course of his illness suffered also from pleuro-pneumonia, suppurative pleurisy, and parotitis also going on to suppuration. The pus in the abdomen found a way for itself to the navel, and the wound at this point was kept open by drainage-tubes, while the abdominal cavity itself was washed out twice daily with tincture of iodine largely diluted. The thorax was opened with a bistoury, and the pleuritic exudation treated in the same way as the abdominal. The drainage-tube was removed from the thorax on the 1st of October, from the navel on the 20th of December, and the boy finally made a complete recovery.

The second case was that of a girl aged 10 years, was uncomplicated, and received similar treatment, which was followed by cure at the end of three months. B. attributes great importance to the use of drainage and the injection of the dilute iodine. W. A.

THE INFLUENCES OF DIFFERENT MODES OF ANTISYPHILITIC TREATMENT ON PREGNANCY (F. Weber; *Allg. Med. Centralztg.*, 1875, Nos. 10 and 11).—These observations were made upon one hundred and twenty-nine pregnant women, among whom it should be noted that twenty suffered from gonorrhœa with slight complications. In twenty per cent. pregnancy did not continue until full term, the time at which it was interrupted being, in a large proportion of the cases, in the seventh or eighth month. Most of the children of these women died soon after delivery. The most favorable results were attained by the treatment by mercurial inunctions, for of the women thus treated, thirty-five in number, none aborted. Of twenty-three women who were treated by inunction and the iodide of potassium, or in whom, owing to debility, inunction was substituted by the iodide, twenty per cent. aborted. When the iodide of potassium and the bichloride of mercury were used there were fifteen per cent. of premature deliveries; and when the iodide alone, thirty-six per cent. After delivery the condition of the women who had been treated by inunction was more favorable than that of those on whom other modes of treatment had been carried out. W. A.

TREATMENT OF EPILEPSY AND OF CHILDREN'S CONVULSIONS (*Bull. Gén. de Thérap.*, July 30, 1875).—In a certain number of cases of epilepsy and eclampsia, the origin of the attack seems to be an instantaneous vascular contraction, propagated from the periphery towards the centre. Following this idea, Dr. Demme gives a hypodermic injection of from one to two milligrammes of atropia. In a case of obstinate convulsions occurring repeatedly in a child of six months, he obtained marked amelioration by injecting a solution containing five milligrammes of atropia to one hundred grammes of water. According to him, the effect produced depends on the paralyzing action which atropia exercises upon the terminal intracardiac branches of the pneumogastric and upon the peripheral vaso-motor nerves. J. W. W.

LUMBAR AND ABDOMINAL NEURALGIA PERSISTING AFTER THE CURE OF UTERINE LESIONS (*La France Médicale*, August 7, 1875).—M. Siredey calls attention to the persistence of the pains caused by uterine and peri-uterine inflammation after the disappearance of these diseased conditions. The painful localities are at

the points of emergence of nerves in the groin, upon the abdomen, in the lumbar region, etc. Instead of attempting to treat the uterus, which has often returned to its normal condition, we should consider such cases as induced by a nervous temperament, and should treat them by hypodermic injections of morphia, cinchona, pills of iron and quinine, and, if the patient is able to support them, by cold douches. J. W. W.

TREATMENT OF ACUTE PERITONITIS BY THE INJECTION OF WATER INTO THE PERITONEAL CAVITY (*Bull. Gén. de Thérap.*, July 30, 1875).—Basing his opinion upon some experiments made upon dogs by Nerlin, and also upon the practice of ovariologists, M. Netter thinks that injections of water might be of service not only in ordinary peritonitis, but also in the puerperal variety. He believes that aqueous injections into the abdominal cavity, employed from the onset, may cut short acute peritonitis, and that we would now be justified in making such injections at least in all cases of traumatic peritonitis when at the same time there exists a wound, made either accidentally or surgically, and permitting the introduction of a canula. J. W. W.

RUPTURE OF AN HYDATID CYST INTO THE VERTEBRAL CANAL; COMPRESSION OF THE SPINAL CORD (*Gaz. Heb.*, July 23; from *Bull. de la Soc. Anat. de Paris*, 1875, p. 93, t. lx.).—The patient, without previous symptoms, suddenly became paralyzed on rising from his bed one morning. The paralysis continued, bed-sores and urinary troubles supervened, followed by death. The autopsy showed an hydatid cyst, opening into the vertebral canal on a level with the ninth and tenth dorsal vertebræ, and which compressed the cord. The cyst was found to have originated in the right pleural walls, and to have penetrated the intervertebral disk. X.

ON THE ORIGIN OF VESICAL CALCULI (Franz Hofmann: *Archiv der Heilkunde*, 1874).—Calculi from the bladder of the ram are characterized by great softness, and when fresh were found to contain 86.84 per cent. of water, leaving only 13.11 per cent. of solid matters. After having been dried, they floated when thrown into water. After treatment with acetic acid a framework was left, which was found, upon examination, to consist of spermatozooids, so that in explanation of their origin it must be supposed that the seminal secretion found its way into the bladder, and became thickened by the precipitation of urinary salts upon it. W. A.

PAIN ABOUT THE KNEE IN COXALGIA.—A. E. Fick (*Wiener Med. Wochens.*, 1875, No. 10) endeavors to prove that many persons who have no anatomical knowledge, more especially children, have no idea of the existence of a joint at the hip, and refer all the action of locomotion to the knee. Since the power of localizing sensations in the interior of the body is but slight, the pains attending commencing coxalgia, which usually are not very severe, are not sufficient to call the attention of the patient to the real seat of the disease. The suffering, however, becomes more and more severe, and is finally connected with movement of the hip. W. A.

TREATMENT OF OZÆNA BY INJECTIONS OF CHLORAL (*Bull. Gén. de Thérap.*, July 30, 1875).—M. Créquy reports the cure of an obstinate case of ozæna by the injection of a solution of chloral. He simply made a siphon of an india-rubber tube by putting one end to the injection and the other well up into the nasal cavity. The disease had resisted injections of tannin, phenol, corrosive sublimate, etc., but was cured in a short time by this method. J. W. W.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

GLASS.

OUR readers have no doubt heard of the discoveries which threaten to break the uniformity of processes and results that has reigned supreme in glass-manufacture since at least 1500 B.C., when was prepared that bead which a modern explorer unearthed in Thebes. The particulars of these discoveries are not so widely known, and merit mention here. The discoverer of "toughened glass," M. de la Bastie, is not a glass-manufacturer, but is a French gentleman, educated as an engineer, but placed by his private fortune beyond any need of practising his profession. For many years he has devoted himself to his self-imposed task, and finally, knowing that the toughness and tenacity of steel are greatly increased by dipping hot plates of it into heated oil, tried a similar method upon glass. Somewhat over two years ago he succeeded in producing glass which would bear hammering; but, with various articles of such character staring him in the face, he found that he had lost the key and was unable to duplicate his work.

It required two years of unwearying industry before complete success was at last obtained, but then an inexpensive glass was produced which bids fair to change the old proverb, "as brittle as glass," into "as tough as glass." The bath now used is a mixture of oils, tallow, wax, and resin, and similar substances, and the hotter the glass is when plunged into it the better is the result. A thin plate of this thoroughly toughened glass let fall on an iron

grating rebounded a foot without injury. The new material cannot be cut with a diamond, but yields readily to the emery-wheel. Consequently, whilst for window-panes it will probably be necessary to use only set sizes, unbreakable cut-glass utensils are readily prepared of any shape or size. Already this toughened glass has been introduced into the English market, and preparations are being rapidly perfected for manufacturing it on the largest scale. Curiously enough, whilst M. Bastie was perfecting his process, another civil engineer, Mr. Macintosh, of Westminster, was experimenting upon the hardening of glass. Like M. Bastie, he also drew his inspiration from the iron-workers, among whom he indeed has been prominent. Like Bastie, he practised the plunging of heated glass into baths, but by having the liquid at a very low temperature he succeeded in rendering glass, clear or colored, as hard as the hardest gems. He asserts that he has made fictitious gems even harder than real diamonds.

The results obtained by these two experimenters seem to show that glass, like steel, may be tempered at will, and suggest an almost limitless train of useful applications.

SPOONS IN MEDICINE.

THE following award of a coroner's jury in the city of Exeter, England, speaks for itself. The use of the minim-glass or of the drop is the proper way to administer powerful remedies. If the spoon be used, the physician should always ask to see the spoon which is to be employed:

"Congestion of the lungs, accelerated by an overdose of opium innocently administered by her mother from a *modern* teaspoon, containing two drachms, instead of from a teaspoon of older date, containing one drachm."

The victim was an infant.

SOME of the Western journals are occupied with the discussion of the action of the Evansville Medical Society, which expelled a member for announcing himself as a specialist through the daily press. There can be no doubt that the Society was right: its quondam member was certainly guilty of that which is said to be worse than a crime,—a blunder,—and should suffer accordingly. The correct interpretation of the code of ethics, according to the tolerated practices of some of the leading Eastern specialists, is to open a dispensary, under the ægis of some established institution if possible, otherwise in a hired room around the corner from the office, and advertise this special dispensary,

adding, in displayed type, Dr. —, aurist, or what may be, in charge, office such and such street, hours such and such. Then all goes merry as a marriage-bell; the dear public learn where their special ills may be cured, practice flows in, professional etiquette is maintained, and universal harmony prevails.

URINALS.—Whether, by locating proper urinals, our city authorities will ever do away with the hideous sign-boards "Commit no Nuisance here," as well as with the stained walls of alley-ways and the streamlets which trickle often most inopportunistically in the evening across the pavements, we do not know. We live, however, in hope, and consequently note with interest that in London only such urinals are found to remain decent as are built of slate, with a wide, well-inclined gutter, and a free stream of water constantly running.

THE lowest point in the race towards complete degradation appears to have been reached by the Keokuk Medical College. According to the *Clinic*, its catalogue is illustrated with a "hideous dissecting-room scene." The pictures displaying perineal dissection are said to be "disgusting in the extreme." *O tempora! O mores!*

OUR readers will remember our notice of the case of Dr. Wood, who was put on trial in England for manslaughter, on account of the death of a woman under his care from rupture of the uterus during labor. We are happy to say that, by direction of the judge, he has been acquitted.

THE London *Lancet* warns against the deleterious effects of travel in the underground railways of the metropolis, on account of the excessive impurity of the confined air of the tunnels.

THE Philadelphia colleges have already commenced their autumnal courses, and the indications of large classes this winter are very good.

LEADING ARTICLES.

THE INFLUENCE OF THE LOWER ORGANISMS IN THE PRODUCTION OF INFECTIOUS AND CONTAGIOUS DISEASES.

III.

IN addition to the diseases which are connected with the putrefactive process or with local inflammations, bacteria have been found in all fevers, the contagious characters of which have been by some attributed to these organisms.

So far back as 1850, Panum expressed the idea that the development of a certain kind of fungus stood in a specific relation to cholera. More recently Coze and Feltz have maintained fevers to be, in fact, internal fermentations, depending upon organisms in the blood. Hallier regards them as internal parasitic diseases, and attempts to describe the various forms of fungi observed in each. Buhl, Waldeyer, and Wagner describe a disease under the name of *intestinal mycosis*, which they suppose to be intimately connected with malignant pustule, and which proves most rapidly fatal with choleraic symptoms.

As regards the bacteritic origin of malignant pustule itself, reference has already been made to this point. Bollinger thinks, with the authors just mentioned, that the so-called intestinal mycosis is only a form of malignant pustule. Christot and Kiener found bacteria in the blood of a man who died of glanders, and also in the blood of various inoculated animals. Although Obermeir does not attempt to decide whether the moving filaments he describes as occurring in recurrent fever are specific or even at all pathological, the discovery of their constant presence in this disease must be most interesting as bearing upon the present question of animated pathology. The various substances found by Salisbury in the excreta of different diseases seem unlike anything met with by other observers.

Bacteria, as we see them, are described as occurring in a large number of diseases of the most varied nature, differing not only very widely in their clinical history, but which have also for many centuries held places in very separate categories. How far may each of these diseases, so radically distinct in their natures, be attributed to a specific organism peculiar to itself? Hallier endeavored to answer this question by describing a distinct form of fungus for each fever; his ideas, however, have long since been abandoned. Few other attempts have been made to draw any distinctions between the forms of fungi found in different diseases.

Letzerich has recently described a form of fungus which he finds in the mucus, and even air-vesicles, in whooping-cough. This he considers the specific cause of the disease, and believes himself able to produce true whooping-cough in the rabbit by means of the fungi removed from patients suffering with this disease and cultivated in a solution of sugar! He also describes differences between the diphtheritic fungi and those found in whooping-cough, in their mode of development, appearance, and action: the fungus of the latter disease does not penetrate the tissues or tend to produce putrefaction, both of which characters are found in the diphtheria bacteria. Klein has described some very peculiar organisms in the tissues around the lesion of typhoid fever, which seem unlike the micrococci usually met with and may be peculiar to that disease. Billroth says, and we believe this opinion is now shared by most adherents of the bacterial theory of disease, that though different modes of culture may produce various forms, according to the nutrient matter used, none differ in any essential point from those found in

putrid substances outside the body. From this fact, and from the similarity which exists between the forms described in various diseases, he concludes that, up to the present, no morphological distinction is known by which one can decide that a given bacterium belongs to any definite disease.*

Besides the investigations into the bacterial origin of malignant pustule, glanders, recurrent and typhoid fevers, and whooping-cough, above mentioned, researches into the following affections have of late been undertaken from the same standpoint. Heiberg, Virchow, Eberth, Rud. Maier, Burkhart, Heiler, have all contributed studies or single cases of the so-called endocarditis bacteritica, mycosis endocardii, or diphtheritic endocarditis. Researches upon the bacterial origin of erysipelas have been published by Anfrecht, Orth, Hirschberg, Hiller, and Lukomsky, the latter attracting very considerable attention. In regard to cholera, Lewis's and Cunningham's researches have been very careful and are worthy of study. Eberle, Nedswetzky, and Andreas Högyes have also published researches in the same direction. Variola as connected with the lower organisms has received attention from Lugenbühl, Zuelzer, and Weigert. Even acute yellow atrophy of the liver has been regarded by Klebs and Lander as connected with bacteria.

Recently a discussion took place in the London Pathological Society upon the germ-theory of disease, in which the whole subject was brought up for review. Dr. Charlton Bastian, a well-known advocate of the theory of spontaneous generation, opened the question in an able address combating the hypothesis of a bacterial origin of disease. The propositions maintained by him may be briefly summed up as follows:

1. With two exceptions, no definite germs or organisms are to be met with in the blood of patients suffering from these diseases in any stage of their progress.

2. The virus or contagium of some of these diseases, whatever it may be, does not exhibit the properties of living matter.

3. On the other hand, the virus of most of these contagious diseases with which definite experiment has been made is most potent in the fresh state, whilst its power very distinctly diminishes in intensity as organisms reveal their presence more abundantly therein,—facts which seem to point to the conclusion, or at least are quite consistent with the notion, that the contagious poison may be a chemical compound which gradually becomes destroyed or modified by the successive changes taking place in association with processes of putrefaction.

4. There is the extreme improbability of the supposition that this whole class of diseases should be caused by organisms known only by their effects.

5. The facts of the sudden cessation, periodical visitation, and many other phenomena of epidemics, however difficult they may be to explain upon any

hypothesis, seem to oppose almost insuperable obstacles to the belief that living organisms are the causes of such epidemics of specific contagious diseases.

Dr. Bastian's views were ably attacked by Dr. Burdon Sanderson, who pointed out the impossibility of reconciling the appearance and disappearance of the spirilla germs in the exacerbations and intervals of relapsing fever with any theory of contagion save the germ-theory. He also alluded to the course of sheep-pox, where two processes went on simultaneously, the development of pustules and the development of organisms. The debate was carried on by various other investigators, of less celebrity, but showed a tendency to theorizing without an adequate amount of facts, and, upon the whole, the discussion has not added very much to our knowledge of the subject.

Birch-Hirschfeld, in a general survey of the present state of our knowledge of the bacterial origin of disease, speaks as follows:

"We must confess that in a majority of diseases the fungous origin of which has been made the subject of inquiry, we possess little or no exact proof of a parasitic cause, not even in the case of malignant pustule or that of relapsing fever. But the *probability* that bacteria are not insignificant associates of these pathological processes is, to an unprejudiced observer of the facts recently discovered, very strong, and the same may be said of the diseases previously mentioned.

"The chief difficulty in the discrimination of the objects alluded to lies in their extremely small size, in the unsatisfactory condition of our knowledge regarding their development and the circumstances of their existence.

"The morphological similarity of the various species of bacteria found in connection with different diseases is certainly, as has been said before, no evidence against their pathological significance, but it undoubtedly is a great hindrance to their convincing demonstration.

"There can be no question, however, on the other hand, that much which we already know regarding various circumstances connected with the life and development of bacteria agrees singularly well with the ideas impressed upon our minds when we endeavor to form a conception of the infectious material of epidemic disease. We find ourselves under these circumstances almost inevitably forced to think and speak of the *germs* of infection, not the *gases* of infection, and so on. The usually unnoticed penetration within the body, the period of incubation (which we can scarcely explain otherwise than by the theory that the germs must first develop themselves in the body to a certain extent before they unfold their injurious action), the spread and increase of contagion from sick bodies,—all these facts point to such an explanation.

"Let it be considered, further, that only a portion and not all of the population are attacked in an epidemic of any given disease, although the infectious material undoubtedly reaches all or nearly all. This obliges us to admit that the observed facts are most easily ex-

* We are indebted for this review of progress, as well as for various other materials used in this article, to a "Report on Pathological Anatomy," by Dr. Gerald Yeo, Irish Hospital Gazette, October 1, 1874.

plained if the infectious material is conceded to be of a vegetable organic nature, the germs of which do not flourish under all circumstances, but only where they find an appropriate soil.

"It must be conceded, however, that so far as most of the forms of bacteria are concerned, investigation shows that if they are not received in too overwhelming quantity the *healthy* organism offers them an almost absolute resistance. Proof can be adduced in support of this; besides, there are certain bacteria which are injurious only when their invasion occurs in an already disturbed locality. Proof also is available in the case of many diseases for the assertion that *those only are attacked by the disease who were sick already*."

In concluding this article, which, from the circumstances of the case, is brief and imperfect, and which, from the mass of material to be examined, must necessarily often appear to a certain degree undigested, we must refer the reader desirous of further knowledge of the matter to the articles quoted, and also to a lecture by Moritz Kaposi, published in the *Vierteljahresschrift für Dermatologie und Syphilis*, 1874, p. 55. This article is accompanied by a plate giving admirable representations of the principal varieties of disease-organisms. Dr. Stimson's article, which is perhaps more accessible, is also accompanied by a very good plate.

REVIEWS AND BOOK NOTICES.

ON THE ADMINISTRATION AND VALUE OF PHOSPHORUS.

By E. A. KIRBY, M.D., M.R.C.S., Esq. Philadelphia, Lindsay & Blakiston, 1875.

This pamphlet of over fifty pages is very readable, contains much asseveration and explanation as to the value of phosphorus in various conditions of nervous exhaustion, but puts forth very little that is at once new and valuable. Its *raison-d'être* appears to be the peculiar preparation which its author invented, and which is prepared at the laboratory of H. & T. Kirby & Co.,—this pilula phosphori mollis seemingly affording the only perfect method of exhibiting the drug that ever has been or will be produced by human ingenuity. The subject of the administration of phosphorus is certainly very important, and the desire at the same time of doing good and advancing the fortunes of self or family is no doubt a laudable one, but in therapeutic writing the result is not apt to be especially unbiassed and trustworthy. Therefore we advise our readers to season their reading of the brochure with at least a grain of salt. If the pills really contain the metalloid unoxidized in a diluent favoring solution, they must be good; we suppose they are good. Whether they are better than all other forms of administration is more doubtful; probably they resemble closely the preparation of Prof. Percy, of New York, in which the drug is dissolved in cacao butter and coated with gelatin. After reading the pamphlet, we confess, it still seems to us wisest to eschew all pills of phosphorus, although they have the great advantage of tastelessness, because they are liable to vary in the amount of the remedy contained in them, and to undergo oxidation and deterioration by age. The oleum phosphoratum of the Prussian Pharmacopœia, which has been much used, is undoubtedly very nauseous; but if to a saturated solution of phosphorus in chloroform an equal amount of spirit of camphor be added, and the

whole made into an emulsion with gum, a little sugar, and mint-water, the resultant liquid is usually taken without complaint.

THE MOVEMENTS AND INNERVATION OF THE IRIS. By DR. H. GRADLE. Chicago. Pamphlet, pp. 56.

This brochure is a reprint from the *Chicago Journal of Nervous and Mental Disease*. It is a brief *résumé* of the results obtained by numerous experimenters on the physiology of the iris, and offers a very fair view of our present knowledge of the much vexed subject of which it treats. It is too brief to be satisfactory to the general reader; but the very numerous references to authorities make it valuable as a bibliography of the subject. The author has thrown no new light upon points still held in dispute. S. D. R.

SELECTIONS.

CHOLAGOGUES.—In Dr. Rutherford's and M. Vignal's experiments a modification of Röhrig's method was adopted. Dogs which had fasted for eighteen hours were curarized, and artificial respiration maintained. A canula was tied in the common bile-duct; the cystic duct was clamped. The bile flowed from the canula into a finely graduated cubic centimeter measure, and the quantity secreted was recorded every fifteen minutes. It was shown that this method of continuous observation yielded results far more reliable and instructive than that adopted by Röhrig.

Two experiments on the secretion of bile in dogs that had fasted for eighteen hours, and which received nothing more than the doses of curara used in all the experiments for the purpose of keeping the animals at rest, showed that the biliary secretion was not affected by the doses of curara given; that the biliary secretion, on the whole, somewhat diminishes in the course of an experiment lasting from six to eight hours, but that the chemical composition of the bile remains almost exactly the same. The curara was always injected into a vein; the various substances hereafter mentioned were injected directly into the duodenum; for this purpose the wound in the abdominal wall was opened, and the substances injected through the wall of the viscus.

Three experiments with croton oil showed that although it produced violent irritation in the alimentary mucous membrane in all cases, it increased the biliary secretion in only one instance. A high place is, therefore, not assigned to this substance as a stimulant of the liver.

Six experiments with podophyllin proved that this substance greatly increases biliary secretion. A definite statement regarding the composition of the bile before and after podophyllin will be given in the report. Röhrig's statement that aloes deserve a high place as a hepatic stimulant was confirmed by three experiments, in which the extract of Socotrine aloes was employed. The analysis of the bile (not hitherto given), however, showed that after aloes the bile is more watery; nevertheless, the velocity of secretion is so much increased that it certainly causes the liver to excrete more biliary matter.

Three experiments with rhubarb proved that it is a far more important hepatic stimulant than Röhrig has stated it to be. Doses of rhubarb were given nine times in the course of the experiments, and they never failed to excite the liver within half an hour after they were given. Analysis of the bile before and after rhubarb in all the three experiments proved the remarkable fact that, notwithstanding the greatly increased velocity of secretion after rhubarb, the bile-solids secreted by the hepatic cells are not diminished. The rhubarb appar-

ently calls forth an increased secretion of normal bile. Three experiments with senna proved that its power as a cholagogue is far below that of rhubarb. The bile is rendered more watery. Four experiments with the aqueous extract of colchicum proved that it is a very decided cholagogue. The bile was rendered more watery, but the increase in the velocity of secretion was such that the amount of biliary matter excreted by the liver was certainly increased.

Two experiments with the solid extract of taraxacum proved it to be a cholagogue, though not a powerful one. Two experiments with scammony proved that it has a slight cholagogue action. Of four experiments with calomel, the secretion of bile was slightly increased in one, but there was nothing but diminution of the secretion in the other three. Purgative action was produced in all. The bile was rendered more watery.

Two experiments with gamboge gave no evidence that this substance is a cholagogue. One experiment with castor oil confirmed Röhrig's statement that this substance has scarcely any cholagogue power. Two experiments with dilute alcohol injected into the stomach showed that after the alcohol was given, the secretion of bile slightly diminished.

In the report, a full account will be given of the post-mortem examination of the state of the alimentary canal (hitherto entirely omitted in such experiments), so that the effect upon the biliary secretion and that upon the intestinal mucous membrane can be compared.

It was shown that the increased biliary flow from podophyllin, rhubarb, etc., in these experiments could not be ascribed to reflex contraction of the gall-bladder, for this had been previously wellnigh emptied by digital compression, and the cystic duct had been clamped. Nor could it be ascribed to reflex spasm of the larger bile-ducts, for the exaggeration of the biliary flow was far too great and far too prolonged to be explained in this way. Reasons were adduced for regarding it as probable that the agents are absorbed, and act on the liver directly. It was not professed, however, that their *mode of action* was definitely settled, the experiments having had for their primary object a determination of the facts of the case.

The opinion was expressed that powerful purgative action tends to diminish the biliary secretion.

When a hepatic and intestinal stimulant, such as podophyllin, is administered to an animal that is not fasting, it is probable that—1, the liver is excited to secrete more bile; 2, the absorption of bile and food from the small intestine is diminished on account of the purgative effect.

In conclusion, it was pointed out that this research proposed to be simply a contribution to comparative physiological pharmacology; and that it was left to the clinical investigator to compare these results with those observed in human pathological conditions.—*British Medical Journal*.

INJECTION OF QUININE INTO THE TRACHEA IN INTERMITTENT FEVER.—Some years ago, Dr. Jousset, of Bellesme, travelling in the northern part of the Greek Archipelago, was called in the morning to see a Greek child, aged twelve, who was seriously ill. On arriving, he was informed that the child was delicate, and liable to febrile attacks, but had been in her ordinary health the day before, when she had been playing with other children. In the evening she had suddenly become pale and shivery, and the parents thought her dead; but after two hours or less she had partially recovered and fallen into a deep sleep. In the course of the night she had two more fainting-fits. When Dr. Jousset saw her, she was lying on a thin mattress on the floor, extremely pale, with deep-sunken eyes,—in a word, like

death. The respiration was scarcely perceptible; the pulse from 38 to 42, very feeble. Slight indications of intelligence still remained. On auscultation, coarse râles were heard. The belly was soft, the liver normal, the spleen very large. M. Jousset diagnosed it as a case of malarial fever of bad type; and he immediately endeavored to give the patient some quinine, but vomiting was induced, and syncope. Having previously had a successful case, he at once proceeded to inject a solution of hydrochlorate of quinine into the trachea. He inserted the trocar of a Pravaz' syringe into the middle of the trachea, between the first and second cartilaginous rings. A little difficulty was experienced, as the thyroid gland was large, and he only satisfied himself that the point was free by blowing through the canula. The pulse was now 31. No effort at coughing was made, and he thought she had succumbed. Five minutes after, the pulse was 40. The limbs were now covered with warm flannel, and light friction made. In ten minutes the pulse had risen to 45, and an involuntary evacuation occurred. She murmured some words. In thirty-five minutes she asked for some drink. She complained of intense pain in the head, which, however, was not hot. In an hour the pulse had risen to 96; and shortly afterwards she was in her ordinary health.—*London Lancet*.

POISONING BY OPIUM OF A SUCKLING BABE THROUGH ITS MOTHER.—The *Boston Medical and Surgical Journal* says, "In our foreign exchanges we learn of a case of poisoning of an infant by opium administered to the mother. The latter was about to undergo an operation, and at ten o'clock in the morning she took twenty-five drops of Battley's sedative solution, and repeated the dose at two o'clock. At eight o'clock in the evening she took five centigrammes of opium in a pill.

"Her child, a strong boy seven weeks old, was restless throughout the day. At midnight he took the breast, and suddenly fell into a deep sleep, in which he remained for six hours. On awaking he sucked a little, and again slept throughout the day. At two P.M. respiration diminished in frequency, and became less deep and jerking. At six P.M. the pupil was contracted, respiration imperfect, jerking irregular, but in frequency nearly normal. It was with great difficulty that he could be aroused. Coffee was administered by the mouth and by the rectum, and the patient was exposed to the draught from an open window, and in about an hour he seemed better. An hour later, respiration ceased for a while, and he appeared dead; life, however, returned, and the following day, by two A.M., he was out of danger."

ALCOHOLIC SOLUTION OF BROMINE IN UTERINE CANCER.—Henneberg (*Centralblatt für die Med. Wis.*) reports six more cases in which the alcoholic solution of bromine (1.5) was proved to be of undoubted value, both in the after-treatment of the wounded surfaces after the enucleation of the cancer and in its direct application in the form of parenchymatous injections and tampons. Henneberg has further tested the action of bromine on cancerous neoplasms in various extirpated tumors. Portions of the tumor which were placed in the solution and left to remain in it for forty-eight hours, on being removed showed only fibres of connective tissue with isolated (*Spiegel*) mirror-cells. In the case of a freshly extirpated cervical cancer, the cancerous masses were found destroyed throughout.—*Med.-Chir. Centralblatt*, No. 18, 1875; *New York Medical Journal*.

REMOVAL OF BREAST BY ELASTIC LIGATURE.—M. Fériér presented to the Société de Chirurgie a cystosarcoma of the breast which he had removed from a female eighty-four years of age, who was in a very

enfeebled condition. The tumor, existing for twenty-four years, was of the size of the fist, movable, and separated by its weight from the adjacent parts. The operation consisted in passing a band of rubber through the base of the tumor, and afterwards tightening it by clamps. The tumor during the first days assumed a reddish color, then became blue, and finally fell off. The patient, a few months later, succumbed to an attack of erysipelas of the face. The author believes that the elastic ligature in removal of tumors is preferable in old people to every other method, and that in employing it we avoid the loss of blood which is inevitable in the cutting operation; cicatrization is more rapid than after the use of the galvano-cautery; lastly, anæsthesia is dispensed with.—*Revue de Thérap. Méd.-Chir.*; *New York Medical Journal*.

ERYSIPELAS FROM APPLICATION OF ARNICA.—A further case of inflammation of the skin following the application of tincture of arnica is reported in the *Wiener Med. Wochenschrift*. An elderly clergyman, who had been in the habit of applying the tincture for every external injury, having sustained a severe bruise of the left knee, applied the diluted tincture; soon afterwards the skin became hard, red, and swollen, and in five hours this swelling had extended over the entire left lower extremity up to the hip, and was accompanied by much heat and itching; it subsided in about fifteen hours without desquamation. The author, Dr. Koller, states that as the tincture of arnica is used by the peasantry in all injuries, he has very often observed this inflammation of the skin, which closely resembles the erythema after bites from insects, after the use of even the diluted tincture.—*New York Medical Journal*.

TREATMENT OF NEURALGIA IN THE MAMMARY GLAND.—In these cases Prof. Broca has returned to the treatment which was employed by Récamier. Whether the tumor is appreciable or not, as soon as there is pain or sensitiveness he has recourse to methodical compression. Récamier superposed a series of disks of amadou, applied closely, and held in place by a very tight bandage, and this bandage was only renewed at long intervals.—*Revue de Thérap. Méd.-Chir.*; *New York Medical Journal*.

GLEANINGS FROM OUR EXCHANGES.

OVARIOTOMY.—In a paper read before the Suffolk District Medical Society, Dr. James R. Chadwick describes the removal of a unilocular ovarian cyst. The abdominal walls were found to be very thick; an incision four inches long was made in the median line, a Wells clamp was applied to the pedicle, and the wound closed with silk sutures. Two gallons of fluid were in the cyst. The total weight of the tumor was eighteen pounds.

The recovery from ether was speedy and unattended by vomiting. Morphine to the extent of a grain was required to relieve the pain apparently due to the traction on the pedicle. Three hours after the operation the patient was dozing, so that he ventured to leave her in charge of the nurse for half an hour. On his return, however, he found her in a state of profound collapse, almost pulseless, scarcely breathing, blue, and clammy. Brandy and heat had already proved ineffectual to arouse the vital forces. He immediately removed the dressings from the wound, and, finding the abdomen considerably distended, took out nearly all the sutures, broke up the agglutinations, and allowed much serum to escape: on search, no effusion of blood was discovered in the peritoneal cavity. The patient revived at

once. The pedicle seemed so tense that, before reclosing the incision, he tied it firmly below the clamp, removed this, and dropped the pedicle in Douglas's pouch. A similar sudden revival from imminent death was observed in 1867 by Koeberlé, who, during an acute peritonitis subsequent to ovariectomy, made an incision into the right flank, where dulness was detected, and allowed a large accumulation of pinkish serum to escape. The patient rallied at once and made a good recovery. Dr. Chadwick's case did well for the following three days, but on the fourth day the intestines became greatly distended with gas, interfering so much with respiration that it became necessary to puncture them. This gave great relief, but she sank and died on the fifth day. After her death it was discovered that her habits had been very intemperate, although she had, previous to the operation, positively denied that this was the case. Dr. Chadwick unhesitatingly attributes the fatal result to exhaustion depending upon the condition induced by the immoderate use of alcoholic stimulants.

In connection with the puncturing of the intestines with the aspirator to relieve the flatulence, it seems as if another indication may be met by injecting brandy, beef-tea, etc., through the canula into the small or large intestine, after the gas has escaped. By this means a patient's strength might be sustained when nothing could be retained in the stomach and absorption by the rectum was too slow to meet the demands of the system. In this way fluids could be introduced in considerable quantities into that part of the alimentary canal from which they would be most readily absorbed. If the use of the trocar is as harmless as is asserted by those who have tried it, there is no reason why the intestines should not be repeatedly tapped for the injection of nutrient and stimulant fluids in many desperate conditions and diseases, when the other resources of medical art have failed. In such a case as this, there would have been no other means of introducing enough alcohol to carry her through the depressing effect of such an operation, had her habits been made known during life. Might not peristaltic action also have been excited by the same measure, and thus a second advantage been derived from this procedure? In cases of fecal impaction, may not the hard, scybalous masses be softened and broken up by the injection of different fluids into their midst, when enemata and purges have proved powerless?

AUTUMNAL CATARRH (*Boston Medical and Surgical Journal*, August 19, 1875).—Dr. Morrill Wyman alludes to the approach of the season when autumnal catarrh, or "hay-fever," as it is popularly called, although there is no evidence that it has anything to do with hay as a cause, sets in and runs its course. He advises those who are able to change their residence to leave, if possible, before the annual return of the disease, and to seek elevated localities. To those who cannot get away he gives the following directions. Avoid the direct rays of the sun, the dust of the street, and the smoke of railway-trains; avoid also such plants as Roman wormwood, golden rod, and others, which are known to bring on an attack. The sleeping-room should have an open fireplace, should not be exposed to the afternoon sun, and, after being well aired for an hour in the early morning, should have the doors and windows closed and kept closed until the following morning. The diet should be nourishing, containing animal food. Alcoholic stimulants should be avoided. Flannels should be worn from the middle of August and increased in warmth as the season and disease advance. Of medicine, quinine has been of the most use as a preventive and a relief to the most annoying symptoms. Its use should be commenced a week or ten days before

the usual return of the disease, and continued through its course, in doses of one to two grains with each meal. Gentle saline or other laxatives are useful, but violent purging should be avoided. For itching of the eyes, mouth, and throat, a saturated watery solution of quinine, made without the addition of any acid, may be used locally with an atomizer.

The irritation and discharge from the nostrils may be relieved by the "head-bath," holding the head for five minutes over a bowl of very hot milk-and-water or water alone, the head and shoulders meanwhile covered with a shawl. In railway-travelling and on dusty roads much relief is gained by placing small pieces of wet sponge just within the nostrils, or covering the whole face with Swiss muslin wet with water. The nostrils are often completely obstructed early in the morning, and swallowing impeded: this may be relieved temporarily by active movements of the limbs for a few minutes,—leaping or running quickly up-stairs,—after which one can often eat his breakfast with comparative comfort.

For the night, a closed room, and, if opium can be taken without inconvenience, six or eight grains of Dover's powder or an equivalent in laudanum or a solution of morphine, often give more or less freedom from that most annoying symptom in the later stages, the spasmodic cough. It may also be relieved by the spray from the watery solution of quinine as just mentioned. The common household mucilaginous remedies, gum arabic and flaxseed tea, for temporary relief are not to be rejected. The asthma, like that occurring at other seasons and produced by other causes, is often spasmodic, nervous, and wayward; it is relieved by a variety of remedies: the inhaling of the smoke from burning stramonium leaves and saltpetre, three parts of the former to one of the latter, probably gives as much relief to a majority of sufferers as any other treatment.

BILATERAL SECTION OF THE CERVIX UTERI (*The Clinic*, August 7, 1875).—Dr. J. C. McMechan refers to the employment of the operation of bilateral section in cases of uterine flexion, in constrictions of the cervical canal or the external or internal os, in sterility, in hyperplasia or severe neuralgia of the cervix. He describes his method of operating as follows: "The left arm must be drawn behind the patient so as to let her rest on the left side of the chest, and the right leg be so flexed as to let the right knee lie just above the left. This is the position recommended by Sims. The patient can now be chloroformed or not, as desired; but this is often not necessary, as the operation is not painful, and lasts but a few minutes. The speculum is now introduced and held by an assistant whilst the operator inserts the tenaculum into the substance of the cervix, and by gentle traction draws the cervix down to the pudenda; one blade of the scissors is to be inserted into the canalis cervicis and the other passed up to the insertion of the vaginal arch, and the incision is then to be made. The other side is to be treated in the same manner. If it be necessary to relieve a constriction at the internal os, it may be done by means of a narrow, blunt-pointed knife; but, according to Barnes, this is but seldom necessary. If much hemorrhage takes place, the cut surface is to be plugged with lint saturated with a solution of persulphate of iron. In the *Wiener Medizinische Wochenschrift* for 1869, Prof. Gustav Braun reports sixty-seven cases of bilateral incision. Fifty-three of his cases resulted favorably."

CHRONIC ENLARGEMENT OF THE TONSILS IN RELATION TO DEAFNESS AND CERTAIN SPASMODIC PHENOMENA (*The Western Lancet*, July, 1875).—Dr. F. W. Godon reports a number of cases of enlarged tonsils in all of which there were frequent attacks of subacute inflammation, accompanied by dysphagia, dryness of

the throat, and hoarseness of voice. In all the adult cases there existed a variable amount of inflammation or congestion. Deafness was in each case a prominent and an alarming symptom, and some of the patients were markedly affected by it, while some presented unusual spasmodic phenomena.

The result of excision of the tonsil was uniformly favorable.

The majority of cases of this kind are regarded as asthma, or as cases of deafness resulting from cold or nervous shock, but little stress being laid upon former throat-troubles. Many cases of so-called deafness from cold depend on a chronic hypertrophy of the tonsils, producing great thickening of and resulting in closure of the pharyngeal orifice of the Eustachian tube, by pressing the palate against it. The affection cannot be recognized by a mere glance at the throat, for sometimes the entire circumference cannot be seen by inspection alone, and in such cases the finger should be made use of in the examination and the gland will be found to be enlarged above and below. Usually the patient complains of sore throat at the time of consultation, and gives in addition a history of successive attacks of sore throat; but, inasmuch as the affection may be chronic from the start, no history of throat-trouble may be given at all. The treatment should be, in all cases of this kind, excision of the tonsils, with proper local applications, when all the painful symptoms will quickly and permanently subside.

FOREST CULTURE AS A PROPHYLACTIC TO MIASMATIC DISEASES (*Pacific Medical and Surgical Journal*, August, 1875).—Dr. W. P. Gibbons, in an able paper on the above subject, comes to the following conclusions. That forest trees in sufficient numbers will absorb, from deep as well as from superficial strata, a sufficient quantity of water to establish regular subterranean currents, and that whatever miasm may be combined with or held in solution by the water will thus be carried off, or have its toxic properties in whole or in part neutralized; that the water thus exhaled will be diffused through the atmosphere in such quantity as to be returned in great part to the surface-soil by precipitation; that the high summer temperature may thus be so modified as to reduce the nocturnal heat below 60°; that the causes thus operating to prevent vegetable fermentation, or to dissipate miasm if developed, would protect the valley from regular visitations of paludal fevers; that the modification of climate thus induced would, under ordinary circumstances, insure average crops of grain in localities which are now dependent either on unusually wet seasons or on artificial irrigation; and that, while immediate benefits would thus be conferred upon the farmer by extensive tree-planting, the remuneration would be cumulative, not only in the regularly increasing value of his timber, but in the prospective reclamation, by natural process, without absolute expense, of land which is now utterly useless.

THE HYPODERMIC USE OF APOMORPHIA AS AN EMETIC IN CHILDREN (*Medical Record*, August 7, 1875).—Dr. William F. Duncan, after considerable experience with apomorphia, says that the qualities which recommend it particularly are the rapidity of its action, the absence of danger from an over-dose, the lightness of its secondary effects, the shortness of the period of nausea, the easy manner of its introduction.

The average time at which emesis has occurred, after the introduction of this drug under the skin, is 2.9 minutes, which is very much less than the shortest time noticed when using the yellow sulphate of mercury.

The longest time for emesis to appear was 4.15 minutes, in a case of alcoholism, while the shortest was 1.75 minutes, in a case of capillary bronchitis.

The dose of apomorphia, hypodermically used, for an

adult, ranges from gr. $\frac{1}{10}$ to gr. $\frac{1}{20}$, but in children it is quite large in proportion.

For a child of 18 months	gr. $\frac{1}{50}$.
" " 2 years	gr. $\frac{1}{40}$.
" " 3 "	gr. $\frac{1}{35}$.
" " 5 "	gr. $\frac{1}{30}$.
" " 8 "	gr. $\frac{1}{25}$.

Glycerin seems to preserve the strength of the drug, and alcohol will dissolve it more readily than water: so that it should be prepared after the following formula:

R Apomorphiæ, gr. vii;
Spt. rectificat., ℥xx;
Glycerin., ℥x;
Aqua, ℥l.—M.

PROPERTIES OF GRINDELIA ROBUSTA (*Pacific Medical and Surgical Journal*, August, 1875).—Dr. Henry M. Fiske has employed the *grindelia robusta*, an herbaceous perennial plant, a native of the west coast of America, in a variety of cases with excellent results. It is a demulcent as well as stimulant, and makes an excellent dressing for vesicated surfaces. In burns, the fresh herb bruised and applied frequently over the injured parts is an unequalled anæsthetic. It is an excellent remedy in uterine catarrh, or in catarrh of the genito-urinary tract. In subduing the intense burning and itching of vaginitis, as well as painful priapism, it is of great value. In the first, the tincture or fluid extract, of the strength of one tablespoonful of either to about four tablespoonfuls of water, should be used as an injection three or four times a day, and cloths should be soaked in it and applied to the pubes as hot as can be borne. In the other, a direct application should be made of the bruised plant, in the form of a poultice, if possible, changed frequently. In a few hours marked beneficial results will be noticed. In iritis, no matter what the cause, whether gout, rheumatism, scrofula, or violence, it seems to be almost a specific. Dr. Fisk gives two cases of iritis in which he employed *grindelia* with excellent effect.

THE EMPLOYMENT OF CHLORAL AS AN ANÆSTHETIC IN NATURAL LABOR (*The Obstetrical Journal*, August, 1875).—Dr. H. Choupe concludes from a number of observations that chloral is a powerful anæsthetic, capable, when it is given in a sufficient dose, of suppressing completely the pains provoked by the uterine contractions. The suppression of the pain, so advantageous in numberless instances, is not obtained at the expense of the regularity and rapidity of labor. The uterine contractions lose nothing, either in frequency or in force, by its administration. If in any case they seem to recur less often than before the administration of the drug, what they lose in frequency they gain in force. In suppressing the pain and the excitation which it provokes, chloral generally hastens the termination of labor, and may be employed without any inconvenience to the mother or the infant. It is especially among excitable women, who have wasted their powers in the first part of labor, and among hysterical patients, that chloral is indicated. Whatever it may be, when it is decided to employ chloral it is necessary to give it in a sufficient dose to produce useful effects, and not to lose by too much circumspection the advantages of a valuable remedy.

POISONING BY PICKLES (*Boston Medical and Surgical Journal*, August 19, 1875).—Dr. H. Lossing reports a case of a family who, after eating pickles, were affected with symptoms of irritant poisoning which were only allayed by active and continued treatment. The "vinegar" in which the pickles were contained was found to be a dilution of impure sulphuric acid, in which were also iron, arsenic, and oxalic acid. Large quantities of this stuff are sold all over the country.

MISCELLANY.

THE LOCALIZATION OF SENSORY CENTRES IN THE BRAIN.—At a recent meeting of the British Medical Association, Dr. Brunton read a paper communicated by Dr. Ferrier, containing an "Abstract of Experiments on the Brains of Monkeys, with special reference to the Localization of Sensory Centres in the Convolutions." The experiments, which were conducted by trephining and the destruction of the sensory centres by means of a red-hot wire, led to the following results. These centres are bilateral, so that when one of the centres of touch was destroyed, there was loss of tactile sensibility in the corresponding half of the body. Stimulation of the centre of hearing caused the animal to prick up its ears as if it heard something, while destruction of the whole of this centre rendered the creature totally deaf. Destruction of the centre of vision corresponding to one eye (*e. g.*, the right) only rendered the animal temporarily blind in that eye, the function, after twenty-four hours, being carried on by the opposite centre. In the discussion that followed, Dr. Nairne pointed out that other observers had arrived at conclusions different from those of Dr. Ferrier, and that the brain of the monkey could not be taken as exactly similar to that of a man; but Dr. Brunton thought the mistake made by German and other investigators who differed from Dr. Ferrier was, that they took the brains of animals lower even than the monkey to correspond with that of man. M. Dupuy had arrived at different results. He said that he had found that when the centres of motion on one side of the brain were removed, paralysis followed for a short time throughout the corresponding part of the body, but that when the centres were removed from both sides of the brain there was no paralysis at all.

PARIS AND LONDON IN 1874.—The *Bulletin récapitulatif de Statistique municipale*, relating to Paris for 1874, has just been issued by the Préfet de la Seine. It corresponds with the Registrar-General's Annual Summary for London, and although its statistics are published in a far more elaborate form than those for London, they afford the means for a comparison between the vital statistics of the two largest cities of the world. The population of London in 1874 was very nearly double that of Paris; the density of population in persons to an acre was, however, only 44 per acre in London, whereas it was 96 in Paris. The marriage-rate was 8 per 1000 in London, and 10 in Paris; the birth-rate 35 in London, and 29 in Paris; and the death-rate 21.6 in London, and 22 in Paris. Whereas the marriage-rate in Paris exceeded that in London by 25 per cent., the birth-rate in Paris was 20 per cent. below that in London. The death-rate in the two cities in 1874 showed little difference, and yet, in consequence of the variation between the birth-rates, the natural increase in the population during the year, by excess of births over deaths, was equal to nearly 14 per 1000 in London, whereas it was not more than 7 per 1000 in Paris. Notwithstanding that the marriage-rate in Paris considerably exceeds

that in London, the proportion of illegitimate births in Paris was nearly 27 per cent., while in London it is only about 4 per cent. With regard to the mortality statistics, the annual Paris Bulletin contains information in far greater detail than the London Annual Summary. The rate of mortality is given for each of the twenty arrondissements and for each of the eighty quartiers into which Paris is divided. In the twenty arrondissements the death-rate in 1874 ranged from 15 per 1000 to 27. It is somewhat remarkable that in the arrondissement in which the density of population is greatest in Paris—namely, more than 300 persons per acre—the death-rate did not in 1874 exceed 16 per 1000. London figures show a very different result.—*London Lancet*.

CULTIVATION OF NUTMEGS IN JAMAICA.—According to Mr. R. Thompson, Colonial Botanist, Jamaica (*Journal of Applied Science*), the cultivation of the nutmeg-tree is very successfully carried on on that island. A number of plants have been supplied, and about two thousand are now under propagation at the Bath Gardens, and will shortly be ready for distribution. A fine nutmeg-tree growing in the vicinity has a crop of about four thousand unusually large fruits. At present prices, this quantity—calculating ninety nuts to the pound—will realize about twenty-two dollars. However, this crop appears to be considerably above the average, as five dollars is the usual value of the annual produce of one tree. The nutmeg begins to bear about the seventh year, and the price of the fruit depends largely on the size, or number to the pound. Large nutmegs count about eighty to the pound.—*Canada Pharm. Journal*.

A HEAVY DOSE OF MERCURY.—"A few days ago," says the Gilroy (Cal.) *Advocate*, "Mrs. Anna Babb's little boy drank a pound of quicksilver. The child is less than three years old, and even in California is considered rather young to indulge in so strong a beverage. He found the mercury-bottle in some rubbish in an old trunk, while playing, and drank the whole, leaving but a few drops. The physician was sent for, who administered some light remedy. The child gave no other indication of having taken the mercury than drowsiness. The metal did not all leave the stomach for ten days, but he was about all the time, and is now as bright as ever."

A TRAINING-SCHOOL FOR NURSES.—The plan of management of the training-school recently established at Montreal, as given by the *Canada Medical Journal*, is as follows: Each nurse binds herself to serve three years, the first six months free, and after that to receive ten dollars per month and two suits of uniform annually, and comfortable board and lodgings at the "Home" when unemployed. The expenses have been met by private subscription, and the concern is now nearly self-supporting. It contains about forty beds.

LOCAL ANÆSTHESIA IN CASES OF LABOR.—Dr. Friedlander relates that, being called to a woman who was suffering intolerable pain in the sacral region, he re-

sorted to an application of chloroform (one part) and ether (two parts), after having vainly tried several other means. He obtained by this means total cessation of all pain until perfect delivery. After having successfully tried the same application in a great many cases, he recommends its employment as an anodyne for the pains of parturition.—*Deutsche Klinik; Lancet*.

EXTRA FEES.—With a view to encourage patients and others who may be in need of the attendance of a physician to send him word at such time as will admit of his arranging his work for the day, the Forfarshire (Scot.) Medical Association have confirmed the resolution unanimously adopted at last year's meeting, "that all visits sent for at 10 A.M., and requiring to be attended to the same day, should be charged at an extra rate."—*Ex*.

AN OLD SAYING.—A contemporary says that "leucocythæmic histomorphoses antitype septicæmic prodromata." This is what every physician has repeated daily to his friends and family; indeed, physicians never converse socially with each other without using as a preface this admirable and appropriate salutation.—*American Weekly*.

DR. J. W. BECHTEL, of Harrisburg, was convicted, August 31, of attempted malpractice on Amanda Earnest, of Hummelstown. Her betrayer, Henry G. Walmer, was found guilty as an accessory.

THE SEXTON'S POEM.—

"It was a cough
That took him off;
It was a coffin
They took him off in."

THE session of the London medical schools commences October 18.

NOTES AND QUERIES.

COMMUNICATIONS have been received from "Peter Aarundel" and "Knowledge-Seeker." These authorities are hereby respectfully informed of the long-existing rule that communications, in order to be published, must be accompanied by the name of the writer, even if the latter is to remain unknown to the general public.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 31, 1875, TO SEPTEMBER 6, 1875, INCLUSIVE.

WEBSTER, WARREN, SURGEON.—Granted leave of absence for one month. S. O. 174, A. G. O., August 30, 1875.

MIDDLETON, J. V. D., ASSISTANT-SURGEON.—Leave of absence further extended one month. S. O. 49, Headquarters of the Army, August 30, 1875.

HUNTINGTON, D. L., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Price, to comply with par. 5, S. O. 158, c. s., A. G. O. S. O. 93, Department of California, August 25, 1875.

O'REILLY, R. M., ASSISTANT-SURGEON.—Relieved from temporary duty at Fort Hamilton, New York Harbor, and to rejoin his station, Fort Hamilton, New York Harbor. S. O. 175, Military Division of the Atlantic, September 3, 1875.

AINSWORTH, F. C., ASSISTANT-SURGEON.—Assigned to duty at Fort Vancouver, Washington Territory. S. O. 115, Department of the Columbia, August 19, 1875.

PRICE, C. E., ASSISTANT-SURGEON.—Assigned to duty at Angel Island, California. S. O. 93, c. s., Department of California.

SATURDAY, SEPTEMBER 18, 1875.

ORIGINAL COMMUNICATIONS.

ENUCLEATION OF TWO VAGINAL FIBROIDS, CONTAINING LYMPHATICS—LYMPHANGIOMA FIBROSUM.

BY JAMES R. CHADWICK, M.D.,
of Boston.

Read before the Obstetrical Society of Boston.

MISS L., 32 years old, began about six years ago to have epileptiform attacks during menstruation. They were not constant in their attendance upon the menses, but occasionally skipped a month. During the past year they have sometimes recurred during the intermenstrual periods, but, on the whole, have not increased in frequency. The spasms are invariably preceded by aura, which is described as a faintness first felt in the left ovarian region, passing thence to the heart and on to the head, whereupon loss of consciousness immediately ensues. The patient has arrested many attacks by pressure in the ovarian region. The convulsions last about fifteen minutes, during which time the patient turns black in the face, has general tonic spasms, her jaws are rigid, she foams at the mouth, and often bites her tongue. On one occasion she broke a tooth against a silver spoon. From this she passes into a stage of delirium, during which she screams, talks wildly, etc. This subsides after a few minutes, and leaves her free from any ill effects, and perfectly able to resume her daily task.

These were all the data that I obtained at my first visit, several months since. Of course the question at once arose, Was this disease epilepsy, or was it only the functional nervous affection called hystero-epilepsy? The distinctive traits were recently portrayed by Charcot* in a clinical lecture as follows: "In hystero-epilepsy the premonitory symptoms are apt to be of rather long duration, and consist principally of an aura, which, starting in most cases from the ovarian region, advances progressively to the head. The cry is prolonged and modulated, not short like the epileptic. The convulsions are identical in the two affections. Instead of entering subsequently upon a stage of snoring, the hystero-epileptic is delirious and subject to hallucinations; there is, however, no maniacal excitement or violence. In the ovarian form of hystero-epilepsy, pressure upon the ovary will invariably modify the symptoms, if not completely arrest the attack; in epilepsy no effect is produced. With the lapse of time the hystero-epileptic becomes capricious, fantastic, but very rarely irascible, gloomy, or dangerous."

My patient presented enough of the symptoms peculiar to hystero-epilepsy to prompt a more particular inquiry into the condition of her sexual functions. She reluctantly confessed to the presence of a tumor at the vulva, first observed at about the

time when the convulsions began to manifest themselves. It had not increased much in size or given rise to discomfort, except at her menstrual epochs, when it had always swelled to double its volume, often causing retention of urine as well as of the menstrual flow. Her sufferings from these causes were often intense.

Examination revealed an oval, elastic tumor, as large as a walnut, lying precisely beneath the arch of the pubis, between the anterior vaginal wall and the urethra, and projecting into the vaginal canal, so as nearly to occlude the opening in the hymen. The uterus was quite independent. On learning that this was probably the exciting cause of her convulsive attacks, the patient readily consented to its removal; but a month elapsed before I saw her again. She then reported that at the last catamenial period the tumor had swelled to unwonted dimensions, had protruded from the vulva, whereupon she had picked off two dry scales from its surface. The tumor had since remained large, protruding, and at the two spots mentioned the tissues had budded out; she had, moreover, had three very severe spasmodic attacks within the month, instead of one in two months, as heretofore. I found that, owing to the constriction of the hymen, the growth or swelling had been forced down until it appeared pedunculated; on its anterior surface there were two mushroom-like excrescences covered with exuberant granulations; these are still visible on the larger specimen; there appeared to be an attempt at spontaneous enucleation.

At the operation on the next day it was only necessary to cut the narrow strip of vaginal wall and capsule intervening between these two excrescences, when the tumor, nearly as large as a hen's egg, was readily enucleated with the handle of the scalpel. This second tumor, the size of a bean, was found in a distinct capsule, near the first, and removed. Ligatures were applied to a few bleeding points, and the lateral edges of the incision brought together with silk sutures. There was no union by first intention, but after three weeks the opening had completely healed.

In their gross appearances these tumors would be grouped with fibroids of the vagina, of which I find only a few on record.

Kiwisch† cites two cases, reported by Gremler and Pelletan respectively. The former writer removed a ten-pound fibroid tumor, which hung by a pedicle from the introitus vaginæ. The latter enucleated a similar growth from its site to the right of the vagina, where it extended from the rectum to the bladder, interfering with defecation and micturition.

Paget,‡ after referring to the cases of Brodie, Hawkins, Curling, and O'Ferrald, describes a tumor which originally projected into the vagina from beneath its right wall. One or two punctures caused it to take on a more rapid growth, whereupon it was dissected out without difficulty. Traetzl§

* Klinische Vorträge, ii. 558.

† Lectures on Surgical Pathology, vol. ii. p. 116.

‡ Monatsschrift für Geburtskunde, xxii. 3, 227.

removed a fibroid as large as a man's fist, which was protruding from the vagina of a child fifteen months old. The seat of its attachment is not given.

McClintock* has met with three instances of this growth. His description of the first corresponds almost precisely with my own case. The growth was, however, removed by ligature, giving rise to a sloughing of the mass with hemorrhage and prostration, but resulting ultimately in recovery.

In the second and third cases the tumors depended by pedicles from the post-vaginal wall. They were taken off with the *écraseur*.

Hecker,† in 1855, excised a fibroid tumor, as large as a walnut, from just behind the left nymphæ.

West‡ speaks of a case then under treatment, as probably being a fibroid tumor. It was three fingers long, lay in the direction of the urethra, "pushed the uterus into the hollow of the sacrum, but was quite independent of this organ."

Meadows§ met with a tumor about the size of a turkey's egg, which projected from the vulva, and was adherent to the vagina on all sides; it was for a while supposed to be a prolapsed uterus. The adhesions were, however, separated, and the growth traced up between the bladder and the uterus. As much as possible of the mass was removed with the *écraseur*; but the patient died on the seventh day with symptoms of embolism. The uterus proved to be independent of the tumor, which appeared to have sprung from the fibrous tissue of the anterior vaginal wall.

A few more cases might be adduced, but I have quoted authorities enough to show that the origin of fibroid tumors in and about the vaginal walls, quite independently of the uterus, is firmly established. The most common site seems to be between the anterior vaginal wall and the urethra.

In only one instance, that of Hecker, was any microscopic examination of the tumor mentioned in the reports; his tumor was found to be "purely fibroid structure."

My tumors proved unexpectedly to be of peculiar, I may say almost unique, microscopic character, as may be seen from this description of the specimen by Dr. R. H. Fitz:

"Sections removed from the tumor were, after being stained with hæmatoxylin, mounted in glycerin and Canada balsam. The tissue was found to be exceedingly rich in delicate vessels, not containing blood, anastomosing with one another in a very intimate manner; the intervening spaces were more or less circular, and contained a fibrillated substance in which were occasional round and innumerable stellate cells. The latter were, in many instances, directly continuous with the vessels previously mentioned, particularly with the smaller ones, which were likewise stellate in their distribution, and apparently differed from the stellate corpuscles only in being more voluminous and having more abundantly nucleated walls. On the addition of acetic

acid, the intercellular substance became homogeneous and translucent. Although the tumors possess the general characteristics of fibromata, they are peculiar in containing such numbers of anastomosing tubes of the nature of lymph-vessels. The term lymphangioma fibrosum would most nearly indicate the apparent character."

It seems to me probable that a microscopic examination of some of the other vaginal fibroids would have disclosed similar histological elements. It is highly desirable that such tumors should be more carefully studied in the future.

I regret to say, in conclusion, that there has been no abatement in the frequency or violence of the epileptoid attacks, despite the successive administration of the bromides, iron, quinine, free phosphorus, etc., etc. The uterus is not enlarged or displaced, but its mobility is more restricted than usual; to its left there is an ill-defined resistance, upon touching which the same sensations are excited as constitute the epileptoid aura. There is no history of peritoneal or cellular inflammation, and no reason for thinking that the resistance is due to any kind of effusion. The practical question arises, Would the removal of the left ovary or the offending body cure the convulsive affection?

CHLOROFORM IN MALARIA.

BY JOS. BERENS, M.D.

THERE is nothing new or original in the treatment of malaria by the internal use of chloroform.|| The absolute desuetude, however, into which the remedy has fallen, coupled with the incontrovertible fact that the potency of quinine is not invariably sustained, the difficulty, also, of obtaining the latter under certain circumstances of poverty or accident, have suggested the publication of the following cases. They occurred in the wards of the Philadelphia Hospital, under the charge of Dr. H. C. Wood:

Case I.—M. B., æt. 37, eight years ago, while living in a malarial district of the city, contracted fever and ague, which disappeared permanently at the end of nine months. There was no recurrence until, three weeks previous to admission, she had a second attack while living in Pemberton, New Jersey. The chills are of the pure tertiary type, appearing regularly at three o'clock every second day, and for which she has been under no treatment. She has had two most unequivocal paroxysms since admission, and expects another this afternoon. Ordered half a drachm of chloroform hourly for three hours preceding the attack; a full drachm at the time of attack. Patient had an hour's sleep after last dose, but no chill nor any subsequent febrile excitement. This was on the 23d of November. The same treatment was applied on the following chill days until December 2, after which no more chloroform was administered. During this time there was no renewal of the paroxysms, while the condition of the patient steadily improved. The patient has been under observation at intervals up to the present, and as yet has had no symptom of a return of her trouble.

Case II.—Mary C., æt. 40, entered the house October

* Diseases of Women, p. 196.

† Monatsschrift für Geburtskunde, vii. 2:97.

‡ Diseases of Women, 3d edit., p. 642.

§ Obstetrical Transactions, vol. x. p. 141.

|| Vide Flint's Practice of Medicine, p. 928.

23, suffering from a quartan ague of two weeks' standing and of moderate severity. The day following her admission, at 10 A.M., she had a well-defined chill and subsequent fever.

Oct. 24.—Ordered a drachm of chloroform every hour for three hours before the expected seizure. Patient slept almost continually from the first dose until an hour after the last. She missed her usual attack altogether.

Oct. 25.—Through the carelessness of the nurse, the patient did not get her medicine. At the usual time there were a few crawling sensations, or rather a feeling as though she were going to have a chill; this was of a half-hour's duration, and followed by considerable fever.

Oct. 26.—To-day she received her medicine as directed, and slept over the time for her attack, without an unpleasant symptom.

Oct. 29.—Patient has been very ill all day, from the combined effects of a chill and aggravated hemorrhoids. The chloroform seemed to have little or no effect, excepting to make her very drowsy.

Oct. 30.—Chloroform as usual, with the effect of preventing the chill.

Oct. 31.—Four hours before the expected attack, she had a severe shake, succeeded by high fever. Chloroform administered in twenty-drop doses every hour, with the effect, as the patient stated, of alleviating the attack.

November 1.—Began the administration of the remedy four hours earlier. She escaped her chill.

Nov. 2.—At 4 A.M., just before taking the first dose of medicine, she had a moderately pronounced chill, after which there was intense fever, with great prostration. Chloroform administered as before, but with no appreciable effect.

The next time treatment was begun at midnight, and the day following at 10 A.M., with the effect of preventing an attack. From this until the 7th there was no attack, although no chloroform was administered.

On the 7th there was a chill at 6 A.M.

Nov. 13.—The paroxysms have been carefully anticipated, with the result of preventing their repetition. Treatment discontinued.

December 15.—There has been no return of the malarial trouble. Patient discharged.

Case III.—C. D., æt. 35, entered November 5; states that he has had fever and ague for two weeks. Has a chill every day at 9 A.M.

Nov. 7.—Yesterday had a decided malarial paroxysm at the stated time. This morning the attack was anticipated for three hours by hourly doses of a drachm of chloroform, with the desired effect.

Nov. 10.—Treatment has been continued with entire success. Treatment discontinued.

Nov. 23.—Discharged at his own request, having had not a symptom of malaria after the first dose of chloroform.

Case IV.—H. McP., æt. 22, entered the house on October 22, suffering from quotidian ague of an unusually severe type. She had a similar attack about a year previous, but for the past few months has had no trouble until three weeks ago, when, she says, her chills returned more violently than ever.

She has been under treatment outside, and appears to have been thoroughly dosed with quinine. She expects her chill in five hours; ordered five grains of cinchona every hour till then. The chill appeared with unabated vigor. During the sweating stage she took fifteen grains more of the cinchona, and in the course of a few hours was well influenced by the drug. The day following she received five-grain doses hourly for four hours before the attack. At the appointed time the chill appeared, the extreme violence of the attack not seemingly affected by the cinchona. The day following, quinine was substituted for cinchona, and Fow-

ler's solution added; this treatment was continued for a week, with no effect in diminishing the force of the attacks. The treatment discontinued, and chloroform ordered in half-drachm doses hourly for four hours preceding the attack, with a full drachm at the time it was expected. *She missed her chill* for the first time, and felt much better than usual. The chloroform retained its power to control the paroxysms for eight days, when it was omitted. At the proper time the day following, the patient complained of feeling cold, but had no perceptible chill; the chilly sensation was followed by a moderate fever, which lasted some hours. The next day the chloroform was resumed. The chill was prevented; there was a little feverishness; pulse 92, temperature $100\frac{1}{2}^{\circ}$.

For six days the treatment was continued with excellent results; on the seventh and eighth, however, there was a return of the chills in spite of the regular administration of the remedy. Quinine and arsenic were now resumed. The day following there was no chill. This effect lasted for three days, when the symptoms returned with full force. Chloroform was now added to the quinine and arsenic. The effect was most happy for five days, when there was a slight chill, after which the temperature ran up to 105° . The same treatment was now persisted in during the following two weeks; during the time she had one severe chill and two insignificant ones. At the end of this time she passed into other hands, and received no more chloroform, although the quinine and arsenic were continued *ad libitum*. The malady re-asserted itself with great virulence, and continued till the patient died of an intermittent pneumonia some months later.

Even recollecting that a certain proportion of cases of malaria tend to a spontaneous recovery, there are reasonable grounds for attributing the benign course of the disease, in the majority of the cases quoted, to the remedy employed. The patients themselves seemed to entertain little doubt on the subject, and chloroform soon gained a reputation in the wards. In Case IV., particularly, the results were most pronounced: here bark and arsenic seemed to possess little power to control paroxysms which yielded, in part at least, to chloroform.

It may be incidentally remarked, before closing, that ether was used in four cases with the view of comparing its effects in this direction with those of chloroform; its value would seem to be incomparably inferior, for, though it undoubtedly exercised some controlling influence, in no instance did the disease subside during its exclusive employment.

NON-MALARIOUS ORIGIN OF INTERMITTENT FEVER.

BY THOMAS H. STREETS,

Assistant-Surgeon U.S.N.

INTERMITTENT fever occurred several times on board the United States steamer "Portsmouth" during her recent extended cruise, and it was always accompanied by such conditions that I was forced to believe that it was produced by agencies other than those of a malarious origin.

Still, however, supposing that chills and fevers are produced by miasmata,—a hypothetical substance supposed to be generated by the decay of vegetable matter,—I insist that there are other agents capable

of producing, and which do actually produce, the identical disease; and these latter I hold to be atmospheric changes, thermometric and barometric, inasmuch as, in the instances which I am about to narrate, these changes always either preceded or accompanied the attacks, whose origin cannot be explained rationally on any other grounds.

The ship left New York in midwinter, when the ground was frozen and covered with snow. We passed from the depth of winter to the tropics, and from the tropics to the temperate regions; and when in the vicinity of latitude 40° S., in the South Atlantic, we encountered a damp, chilly belt, where fogs prevail, a region similar to that in the vicinity of the Banks of Newfoundland in the Northern hemisphere. Here the first cases of intermittent fever showed themselves aboard.

On the day before entering this belt, the thermometer registered 75° Fahr. at noon, and the weather was clear and pleasant; on the day following, the thermometer fell to 60° at mid-day, and the weather was damp, chilly, and foggy. On the third day the thermometer fell as low as 55° at mid-day. During these three days we passed through about three degrees of latitude, for the winds were light and variable.

Another notable instance, when the same thermometrical changes were experienced, and which were accompanied, as in the former instance, by the appearance of some new cases of intermittent fever aboard, was when the ship was cruising to the eastward of the Sandwich Islands, in about the region of longitude 135° W. Here the cold polar current that sweeps down along the western coast of North America meets the warm airs of the tropics and causes a condensation of their moisture. The sky is constantly clouded; the weather is damp, foggy, and chilly; and the thermometer ranges from 66° to 69° Fahr. at mid-day. Along with the intermittent fever there appeared in this instance cases of rheumatism, bronchitis, tonsillitis, and neuralgia, all of which I deemed were due to the operation of the same cause.

According to a good authority,—Parkes,—the horizontal spread of malaria is not more than two or three miles. This is overland. A spread of water seems to be more efficacious in checking its progress. Yet, even if it be transferable "ten, twenty, or even one hundred miles," as is stated by some authorities, our track put us without the limit of its influence in the extreme case: we were over one thousand miles from the nearest land, and taking it in the direction of the prevailing winds, from which the noxious germs would be most likely to come, it was very much farther removed. The only way remaining that I can see to explain the origin of these cases of ague according to the old notion is to say that the germs of the disease were latent in the body, and in this extraordinary state of the atmosphere found conditions favorable for their growth and development; yet this could hardly be applied to those cases that originated *de novo*, of which there were several.

In opposition to the theory of the latency of the germs of the disease, and to the opinion held by

some, that one attack of the disease predisposes to another when exposed to the deleterious agent, I will mention my own experience in Southern Mexico in 1870. I was one of two in a large party who escaped entirely from the malignant fever of that country during a residence there of about eight months. I attribute my immunity to the extreme precaution which I took to keep my body always warm, and not to expose myself to the rains and dews of the night. Slighter changes than could be appreciated here would there cause a decided lowering of the tone of the body in the already enervated state of the system which a residence in a tropical climate generates. I considered myself at the time particularly liable to the disease, for I had, less than a year before, gotten rid of an attack which I had contracted in the bottom-lands of Texas, and which had remained by me for fifteen months. Quinine was given to some of the members of the party, yet it failed to exert any prophylactic properties when not joined with due care to preserve the warmth of the body and to guard against exposure.

Any one who has lived in a malarious tropical country for any length of time, and has been observing, knows full well that the surest way to keep himself free from fevers is to wear flannel next the skin, and to have a roof over his head at night and when it rains. "It has been supposed that wearing flannel next the skin lessens the risk of malaria. As it is generally supposed that the poison of malaria enters by the lungs or stomach, it is difficult to see how protection to the skin can prevent its action, except indirectly by preventing chill in persons who have already suffered from ague. But the very great authority of Andrew Combe, drawn from experience at Rome, is in favor of its having some influence, and it has been used on the west coast of Africa for this purpose with, apparently, good results" (Parkes). I have always found a change to heavier clothing to be a valuable auxiliary in the cure of the disease.

It is hardly probable that the habitations in tropical countries, that have such free ventilation, keep out the invisible malaria, which is freely suspended in the air, penetrating everywhere. What is it, then, that the roofs keep off but the dews and rains?

The native Hawaiian cultivates a root called *taro* (*Arum esculentum*). To cultivate this root successfully it is necessary that the ground should be in a condition similar to that which favors the growth of our Indian turnip. They throw up embankments around patches of land, and then flood it with water until the soil is converted into mud eighteen inches to two feet deep. The root grows in the mud, and the ground is kept so for six months or more in the year. Here are all the conditions requisite for rapid vegetable decomposition; and, as most of the patches are to the windward of Honolulu, the trade-winds are constantly sweeping the malaria over the town; yet intermittent fever is a very rare disease there, as well as on the leeward side of the island, where there are extensive rice-fields as well as *taro* patches.

The only time we had any ague on board the

ship when she lay in the harbor of Honolulu was when there was an interruption in the trades, and the wind blew from the south over the water. The south wind brings rain and moisture, and epidemics of influenza and tonsillitis prevail at the same time. So remarkable are these winds that the natives have called all the southern districts of the islands "kona," which signifies "sick winds."

Concerning the curative agent of ague, quinine, "it is probable that, beyond its powerful tonic effects, this alkaloid has no preventive influence unless combined with careful protection from damp and chill."

"Although quinine was not found to be a preventive, except possibly in the way of acting as a tonic and rendering the system more able to resist the influence of malaria, it was found invaluable in the cure of the complaint" (Livingstone).

TRANSLATIONS.

COMPLETE GANGRENE OF THE LEFT KIDNEY.—M. Avezou reports the case of a man aged 79 years, who, while under treatment for a left-sided pneumonia, complained of having had for several years pain in the left lumbar region. He had never suffered with nephritic colic, hæmaturia, or difficult micturition; the urine was normal, containing neither albumen nor sugar; and there had never been any cedema of the legs and feet. In eight days the patient died.

The autopsy showed the existence of hepatization of the left with some congestion of the right lung, and a healthy condition of the cardiac valves, though there were some atheromatous patches in the aorta.

The right kidney was of firm consistence, and presented to the eye no alteration. The left kidney, however, was black and friable, and had an offensive smell; the surrounding cellular tissue and the walls of the descending colon at the level of the kidney were also dark-colored, but not at all softened. The ureter of this kidney had a small though permeable calibre, while the renal artery was not obliterated in its terminal portion nor in any of its branches.

On microscopical examination, both kidneys showed plainly the alterations due to interstitial nephritis, with atrophy of a large number of the glomerules, there existing no essential difference between the two organs except in the degree of the pathological change. In some of the tubes colloid casts were found, and in certain parts of the left kidney a very small quantity of granular pigmentary bodies were seen. While the specimens were fresh there were discovered a large number of vibrones and small fatty drops on both kidneys. The microscopist had some doubt as to the real gangrenous nature of these lesions. The spleen was also dark-colored, but the bladder perfectly healthy.—*Le Progrès Médical*. J. B. R.

COMPRESSION OF THE PELVIS BY UTERINE FIBROID.—At a recent meeting of the Société de Chirurgie, M. Guéniot read a report upon this subject apropos of a communication made by M. Here, of Rouen. His conclusions are as follows:

1. Complete and permanent occlusion of the intestine by the compression of a uterine fibroid is, fortunately, of rare occurrence; but the more or less severe troubles produced by this cause, either in the functions of the intra-pelvic nerves or in the excretion of fecal and

urinary matters, appear, on the contrary, to be rather common.

2. Albuminuria and certain grave lesions of the kidneys may be caused by the urinary obstruction.

3. The fibroids which cause the most trouble are not always the largest; those which threaten the greatest danger are the ones which do not rise out of the pelvic cavity.

4. Where compression of the rectum occurs, the gravity of the trouble produced is not entirely due to this cause; other causes combine to render the accident more severe (such are length of accumulation of the fæces, peritonitis, and the formation of peritoneal bands, ulceration of the intestine, atony of the latter from the use of opiates, etc.).

5. Finally, the therapeutics of this affection, heretofore so powerless until recourse is had to enterotomy, are comparatively efficacious when the tumor can be raised out of the pelvic cavity.—*La France Médicale*, 1875, p. 453. X.

INHALATIONS OF WINE OF IPECAC SPRAY IN CATARRH AND ASTHMA.—Drs. Binger and Murrel (*Gaz. Méd. de Paris*, 1875, p. 374; from *Siglo Medico*) recommend this preparation, pure or diluted, according to the susceptibility of the subjects. The first liquid inhalation should be drawn deeply in by the mouth, the tongue being kept down and the nostrils closed. The earlier sittings should be short, with a period of rest between each three or four inspirations. Twenty-five patients have undergone this treatment at the hands of Drs. B. and M., of whom the majority were cured in twelve days, but a few before that time.

The first inhalations are sometimes followed by augmentation of the cough, dryness of the throat, and hoarseness; these symptoms are only temporary. Between the respirations of the spray, gargles should be used to remove particles of ipecac from the pharynx, etc., so that nausea may be avoided. The number of sittings may vary from one to three a day, and the temperature, dilution, etc., may be changed to suit the individual case. X.

TUMOR FORMED BY THE GALL-BLADDER; EXTRACTION OF CALCULI; CURE.—M. Paulet reports the case of a woman of 42, who, in November, 1874, felt a severe pain in the right flank, when examination disclosed the presence of an ill-defined tumor. Suppurating ovaritis was diagnosed. In December it was decided to open the tumor. Vienna paste was applied; a small quantity of liquid escaped. Exploration with the aid of a female catheter showed a number of hard bodies. Forty of these calculi were removed, and the patient had recovered by March, 1875.—*La France Médicale*, 1875, p. 453. X.

VALVULAR LESIONS OF THE HEART IN PHTHISIS.—Dr. Frommolt, in a *résumé* of a number of cases, states, first, that the occurrence of chronic alterations of the heart in conjunction with the existence of phthisis is not so rare as we have heretofore supposed; secondly, that the ventriculo-aortic orifice is more frequently involved than the left auriculo-ventricular opening, though there is really not a very marked difference; and, thirdly, that the simultaneous alteration of several of the cardiac orifices in connection with phthisis is only observed very rarely.—*La France Médicale*. J. B. R.

ANOMALY OF THE POPLITEAL REGION (*Bull. Gén. de Thérap.*, July 30, 1875).—M. Silette reports an anomaly of the internal gastrocnemius muscle of the right leg. Instead of being attached to the condyle of the femur by a single tendon, in this instance it bifurcated and gave passage to the neuro-vascular structures of the popliteal space. J. W. W.

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EDITORIAL.

ARSENIC IN AGRICULTURE.

THERE is an animal in these parts whose fecundity would satisfy the longings of even the most ultra of that school of social philosophers whose sole creed is "increase and multiply." We refer to the potato-bug. The number of these pests is simply enormous. We have known a tug lying in the middle of the Delaware River, nearly a mile from either shore, to swarm with them; and a friend informs us that after the last northeast storm the beach at Ocean Grove was covered with multitudes, which, apparently, had essayed to cross the Atlantic and had been beaten back.

The only method of meeting the evil efficiently is by the use of Paris green upon the vines; and considerable anxiety has been felt lest the arsenic should be absorbed by the potato, and thereby poison those who used the tuber for food: indeed, one or more of the eminent toxicologists of our country have published warnings against the employment of arsenical preparations in agriculture.

It has always seemed to us very improbable that plants would take up arsenic when strewn on them in the way practised by the farmer. The poison falls chiefly upon the leaves, and these organs do not absorb other substances than gases. The arsenic which reaches the roots is chiefly that which is washed off the vines by the rain. This is a slow process, and consequently the soil is never strongly impregnated with the poison. Only a very small amount can, therefore, reach the roots, and these

absorbents undoubtedly exert to some extent a selective power, taking in that which is necessary for them, and rejecting that which is deleterious.

Experience seems to have confirmed this *a priori* belief in the expediency of using arsenic. The Paris green certainly has been employed during the last two years to an enormous extent, and no well-authenticated case of poisoning has as yet been heard of.

In order to test the matter more fully, a number of experiments have been made. Drs. Snodgrass, Howland, and Brainerd treated beets with Paris green, and afterwards found evidence of the presence of arsenic. We have not seen the details of these experiments, but it is stated that they were performed in such a manner as to leave room for suspicion that the poison was mechanically adherent to the beet. Other more elaborate experiments have yielded a different result. Professor Croft, of University College, Canada, examined the vines and tubers of potatoes which had been completely drenched with Paris green: from the haulms, which could not be thoroughly washed, he obtained a trace of the metal, but in the washed and peeled potatoes not the slightest indication of the poison could be found.

The experiments of Mr. McMurtrie, chemist to the Agricultural Department at Washington, strongly confirm this result. In this investigation Paris green was mixed with soil in such proportion that it represented nine hundred and six pounds to the acre, estimating the depth of soil at one foot. Peas planted in this poisoned ground came to perfection without hindrance, and on chemical examination neither the fruit nor the vines themselves exhibited any signs of the presence of arsenic. Potatoes grown on plants which had been regularly treated with the drug were also submitted to Marsh's test by Mr. McMurtrie, but produced no stain on the porcelain.

The evidence seems to be conclusive; and we think our readers may eat their tubers with an even mind, even though their potatoes have grown in the scourged district.

FACILE EST DESCENSUS IN AVERNO.

MEDICAL teaching in these United States appears to be ever hurrying on towards utter disgrace and ruin. According to a correspondent of the *Clinic*, Indianapolis now has two great medical schools, whose plottings and counter-plottings keep the town agog. The medical department of the

University of Indiana and the College of Physicians and Surgeons, we are told, "divide the empire of Indiana between them,—one reposing grandly on the State of Indiana, one on the proud body of the medical profession of the State." The University is at present ahead: having captured the "Bobbs Free Dispensary," it bobs with it for—students. Alas! every rose has its thorn, and even bobbing its trials. Like the Legislature of Michigan, Mr. Bobbs apparently had a soul above prejudice: the beneficiaries of his charity must be free to choose their method of practice. At least so we infer, because the card of the Bobbs Free Dispensary reads, "Homœopathic physicians will attend all who desire their treatment; cards furnished to such by the clerk." The lion and the lamb,—the fierce regular with lancet and his heroic doses, and the mild disciple of Hahnemann with his diluted moonshine,—hand in hand, hold sweet converse amid the green parterres of the "Bobbs Free Dispensary." Our system daily perfects more and more of its deadly fruits: yet some men still think it a high honor to hold a professorship in a medical college,—that is, to form part and parcel of, and to uphold by word and deed, the existing system of medical teaching in these United States. *O tempora! O mores!*

PATHOLOGICAL EVOLUTION.—In a somewhat remarkable communication, Dr. John Struthers, of Aberdeen, at the recent meeting of the British Association explained how the tendon, say in a rheumatic shoulder, being no longer of any use, was removed from the upper bone and joined on to the lower bone, by which its use was thereby to some extent preserved. The steps of this process were narrated, and the subject was further elucidated by the exhibition of specimens. Adhering to the lower bone by the effects of excited action, the part of the tendon within the joint, having become functionless, was seen in various stages of passing away, while the attachment of the lower bones, on which the muscle pulled, became gradually stronger, till the adaptation was complete. It is very easy to believe that what may occur as a result of causes within the organism, and be therefore pathological, may under other circumstances happen as a physiological change due to causes without the organism.

TO MEDICAL STUDENTS.—Be sure you are starting right. Failure in life very frequently is the result of a man's choosing a calling for which he is not fitted. You may spoil a good business man to make a bad doctor.

LEADING ARTICLES.

THE MECHANICAL TREATMENT OF DISEASES OF THE STOMACH AND INTESTINES.

DURING the past ten years many advances in the treatment of the diseases to which the viscera are subject have been made, the most important of which have been the adoption of methods by which the remedies administered are brought speedily and directly in contact with the diseased portions of the intestine. There has thus been developed a local and mechanical treatment which properly belongs to surgery in its widest sense, but which, apart from the mere instrumental means used, has more to do with internal medicine.

Kussmaul, in 1867, was the first to publish the results which he had attained in the treatment of cases of distention of the stomach by introduction of catheters; by means of which, and a pump, he was enabled to wash out that viscus. In his publications on this subject the methods, objects, and advantages of this mode of treatment were so clearly laid down and explained that those who came after him have had but little to do except to modify some mechanical appliances and confirm his observations. He limited its usefulness very much, saying that in cancerous stenosis or extensive cicatrization of the pylorus, or even when, with but moderate narrowing, the lesions of previous chronic gastritis had caused marked changes, no complete cure could be hoped for, but merely a moderation of the sufferings of the patient.

An important advance was made by Ploss and Jürgensen, who called attention to the principle of the siphon, and suggested its use for the introduction and abstraction of fluids into and from the stomach, in place of the pumps of various kinds which had been previously employed to effect these objects.

The former of these also advised the use of a double catheter, by means of which a continuous stream of water can be passed into the stomach, making its escape via the same instrument, without necessitating any withdrawal of the tube after its first introduction, or any change of pump or turning of valves, as is essential in effecting the same purpose by other appliances.

This method of treatment has now been known about eight years; but, notwithstanding its undeniable usefulness and the warm recommendations which it has received from many clinical observers, its use has never become at all general. This has undoubtedly been to a certain extent due to the fact that too much has been looked for by those who have employed it.

The most simple apparatus with which the stomach can be catheterized, emptied, and irrigated is a rubber tube, two metres in length, nine millimetres in calibre, and with walls two and a half millimetres in thickness.

The introduction of the catheter into the œsophagus is not usually attended with any difficulty, but before the attempt is made a careful inspection of the mouth, pharynx, and chest should be made. It is of especial

importance to look into the condition of the respiratory and circulatory organs, since cases of sudden death consequent upon the introduction of a sound into the œsophagus, while of somewhat rare occurrence in medical annals, are still to be found. Catheterization can be performed either with the ordinary stomach-tube with a lateral orifice, with the double catheter, or, as Oser, of Vienna, prefers, with a simple rubber tube, open at both ends. It is of importance to know about how far the tube should be introduced, for, apart from the danger of injury to parts of the stomach weakened by ulcerative processes, if it is desirable to remove the contents of the organ, unless the tube is thrust far enough into them this purpose cannot, of course, be attained. Measurements to ascertain the average distance from the mouth to the deepest part of the stomach have been made, and in the stomach of a man of middle size, which was moderately dilated, the cardiac orifice was found to be thirty-nine centimetres from the mouth, while when the tube was pushed forward to a distance of fifty centimetres its extremity reached the deepest part of the organ. In some cases where the stomach is distended to a great extent, so that its lower edge is on the level of the umbilicus, or even lower if the abdominal walls are thin, the end of the instrument can be felt, and thus its position accurately determined. In other cases, resort must be had to percussion, and, when the limit is approximately found, the distance from this line to the mouth must be measured, and a corresponding length of the tube inserted.

The stomach, after the introduction of the tube, can, as was said above, be emptied either by a pump or by the siphon. The use of the latter of these methods does away with one source of accident with which the use of the pump may be attended,—namely, the suction of a portion of the mucous lining of the stomach into the tube when the end of this is directly in contact with the walls of the viscus. If due care is taken in managing the suction, no injury need be done in this way; but cases have occurred in which small pieces of the mucous membrane have been torn off, and found in the opening of the catheter upon its withdrawal.

The introduction and withdrawal of fluid by means of the siphon is of the utmost simplicity. The catheter must first be introduced into the stomach, and a tube attached to its free end, when both are to be filled with water, and the free end of the rubber tube brought to a level which is lower than that of the fluids of the stomach, when they will flow out, unless some solid matter plugs the tube so firmly that the current of fluid in the siphon cannot move it. This mode of procedure on the cadaver has demonstrated that it is perfectly feasible to withdraw almost all the contents of the stomach. The pump can be combined with the siphon and used until a stream is started through the tube, when, if the orifice of escape is lowered, the stream will continue to flow. If it is desirable to irrigate the stomach, in other words, first to introduce fluid and then withdraw it, the same method is used; the only modification being that the free end of the tube must

be kept at a higher level than that of the contents of the stomach while fluid is entering, and must be lowered again when it is desired to cause the direction of the current to change.

If the double catheter, which consists of a rubber tube which is divided down its entire length by a partition, is used, of course some time will be saved, for no changes in the manipulation will be required, and the current will flow uninterruptedly. The amount of fluid which can be introduced into the stomach differs, of course, with its capacity. Experiments upon cadavers have shown that it is a difficult matter to decide, since stomachs which would all be said to be of normal size differ very considerably. If it is desirable to do so, the water can be medicated before it is passed into the stomach, and various astringents, disinfectants, and other drugs have been thus used. The advantages in a diagnostic point of view of this introduction of fluid into the stomach deserve mention, for in some cases of internal tumors, as to whose character and location there is doubt, the exact definition of the area of the stomach is of material aid in determining their seat. In the treatment of cases of poisoning, when the poison swallowed is not of a caustic nature, the “*bougie à double courant*” affords a speedy and ready method of removing the contents of the stomach, and forms a valuable addition to other modes of life-saving apparatus. Cases of this kind, unfortunately, are not usually seen soon enough for successful treatment, and the great practical value of irrigation is in the treatment of certain affections of the stomach. If the object is simply to remove the contents of the stomach soon after a meal, it is better to administer an emetic, for the remains of the food will be apt to choke the tube and stop the flow of liquids. In that frequent form of dyspepsia in which there is a sense of weight in the region of the stomach after eating, bad taste, eructation, giddiness, etc., more good can be obtained by strict diet and attention to other hygienic measures than by this mode of treatment. But in those forms of chronic catarrhs which are attended with enlargement of the stomach and a marked increase of the secretion of mucus, and in those of a torpid character in which a healthy reaction was awakened, irrigation of the stomach was attended with good results. In some of these the mucous secretion forms a coating which mechanically interferes with digestion, and its removal by frequent washings is attended with great improvement in the performance of this function. The existence of perforating ulcer of the stomach should be regarded as a contra-indication to this mode of treatment, but in cancerous obstruction of the pylorus, if there is no hemorrhage, irrigation can be employed, and is often attended with considerable relief.

Simon has done for the mechanical treatment of some diseases of the intestine what Kussmaul did for those of the stomach. He introduced a tube five feet in length into the rectum, and by means of forced injections of water reached the descending colon, although Wachsmuth asserted in 1862 that with a similar tube he

had reached the ileo-cæcal valve. Hegar suggested a much simpler mode for the administration of injections of this character. He placed the patient in the knee-elbow position, and permitted water with a head of one to one and a half feet to flow through a rubber tube into the intestine. Mosler placed his patients on their backs and allowed large quantities of water, even up to five litres, to flow into the gut, and in cases of obstipation, helminthiasis, and also of catarrh of the small intestine, obtained good results. The question as to whether fluid can be in this way introduced into the small intestine cannot be certainly settled by experiments upon the dead body, since the peristaltic motion which may play an important part is here done away with. In the experiments which Oser made to determine this point, in only one instance did he discover that any fluid passed, and all the tests which he made by the introduction of the sulphocyanide of potassium above the valve, and the chloride of iron below, gave negative results. These experiments showed, however, that fluids would reach the higher portion of the large intestine before the lower part is entirely filled, and that the air which is present in the gut cannot be entirely expelled, but remains and distends some portions more than others as the peritoneal attachments are more or less firm. The same was shown by a patient with very lax abdominal parietes, in whom all the structures of the pelvis could be made out by palpation. After only one litre of water had been injected with a head of four or five feet into the rectum while the patient was lying on his back, its presence in the cæcum could be distinctly made out, while the descending colon was but little distended. The irrigation of the large intestine in the living is very simple, and requires no apparatus but a tube four or five feet long, with a stopcock on one end, and a short tube to go into the intestine. If the sphincter is not in good condition, and does not contract tightly around the tube, an obturator made of rubber is also needed to prevent the escape of the injection by the anus. But little pressure should be used at the commencement of the injection; but by elevating the vessel containing the fluid it may be gradually increased, but should be at once diminished if the patient complain of an undue sense of tension or pain. As in the stomach, so also in the intestine the introduction of large quantities of water may be of value either in a diagnostic or a therapeutic point of view. The situation of the large intestine relatively to that of the small intestine is very constant, and when it is filled over its area there is a dulness which forms a good starting-point for determining the situation of other normal or pathological contents of the abdomen.

When incarceration of the gut exists, by the injection of large quantities of water such a strain may be brought to bear upon the incarcerated portion that it may be restored to its normal position. If the incarceration should be at some point in the course of the small intestine, although the water which is injected does not itself pass the valve it is possible that, by the compression of gas before it, it may exert a favorable

action. Oser has himself seen no good results from this mode of treatment in incarcerated hernia, but other authorities have reported them, and before operating it may be advisable to make an effort at the reposition of the gut by intestinal irrigation. The inflammatory affections of the mucous membrane of the large intestine offer the most fruitful field for local treatment. Dysentery, follicular ulceration, catarrh, typhlitis in its early stages, and proctitis can be much more safely and rationally treated in this way, since the remedial agents are brought directly into relation with the diseased tracts. The surface of the intestine can thus be treated as an open wound, and all fecal matters as well as irritating discharges can be readily and frequently removed.

The more usual astringents can be used in this way, and, with the exception of zinc, carbolic acid, and nitrate of silver, in the strength in which they are commonly applied locally; but, as there is some absorption, it is well to give those which are poisonous in small quantities.

Mosler advises the use of this method in diseases of the small intestine, and claims that he has thus obtained good results; but if fluid does pass the ileo-cæcal valve, it can only be by its injection in such quantities as to cause great tension of the large intestine, and at best but the lower part of the ileum will receive it. If good results are thus attained, it is more probable that they are to be attributed to the absorption of the remedies and their action upon the secretion and peristaltic movement of the intestine.

CORRESPONDENCE.

LONDON HOSPITALS AND MEDICAL SCHOOLS.

LONDON, August 9, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—During my sojourn in the metropolis I have visited a number of the hospitals, and have gained some information which may perhaps be interesting to your readers. The number of hospitals in London is legion; but there are three or four that are especially prominent, either from their size or from the reputation of the medical men associated with them. One of the oldest is St. Bartholomew's, which, founded in 1123, has increased its facilities for treating persons "infected with divers great and horrible sicknesses and diseases," until it now contains seven hundred and ten beds, and has connected with it a secondary hospital for convalescents, and a medical school which claims to have more students than any other in London. To show the work done by this one institution, I may state that in some years there have been consumed as much as seven hundred gallons of cod-liver oil, eight hundred pounds of castor oil, twelve hundred pounds of salts; the last-named drugs indicating, one would think, a condition of constipation quite appalling. Such names as Harvey, Percival Pott, Abernethy,

and Paget may well add lustre to this charity of nearly eight centuries.

The finest hospital, architecturally considered, is certainly the new St. Thomas's. This, situated on the south side of the Thames, directly opposite the Parliament Houses, consists of six four-story brick buildings, placed one hundred and twenty-five feet apart, and connected by corridors. It was completed in 1871, at a cost of £500,000, and opened for the reception of patients in June of that year. It is truly a beautiful structure, but it is a question whether the money expended in mere architectural display might not have been employed more advantageously. St. Thomas's also has a medical school; among the lecturers being Dr. Murchison, on medicine; Dr. Barnes, on midwifery; Mr. MacCormac,—who was associated with Dr. Sims, of New York, in the ambulance service during the Franco-German war,—on surgery; and Mr. Liebreich, on ophthalmic surgery.

Guy's is another noted London hospital, accommodating six hundred and ninety patients, and containing a very fine museum of normal and pathological anatomy, as well as one devoted to comparative anatomy. In the chapel of the hospital lie the remains of Sir Astley Cooper, who was buried there at his own request.

Among the smaller institutions may be mentioned University College Hospital, with its long list of names familiar on both sides of the Atlantic; for who has not heard of Sir William Jenner, Reynolds, Sidney Ringer, Tilbury Fox, Erichsen, Berkeley Hill, and Heath? Sir Henry Thompson has but recently resigned his position on the staff of this hospital.

King's College Hospital is small, but can boast of such men as Watson, Beale, Fergusson, and Soelberg Wells. Of the special hospitals the Royal London Ophthalmic Hospital, Moorfields, is perhaps the most important.

A feature in these London hospitals, and a good feature it is, is the almost universal employment of women nurses in the male as well as in the female wards. They certainly make better and more gentle attendants on the sick than men, and the neatness of the wards fully attests the presence of woman. They wear small white caps, and their modest dress and demeanor as they stepped from one patient to another struck me most forcibly. Some of the hospitals have training-schools where these nurses are instructed in the various duties to devolve upon them when placed in the wards. In Philadelphia there exists a somewhat similar institution, where monthly nurses are given instruction to fit them for the lying-in room; but why do we not attach the same importance to the proper training of all nurses? Are not those who attend the patient continually as necessary to his welfare as the practitioner who sees him but once or twice during the day?

The general arrangements of the hospitals of London seem to be much the same as with us, but on the whole I think their wards lack the cheerful aspect that charac-

terizes ours. An exception, however, must be made in favor of the well-waxed floors, which are less likely to harbor germs of disease than ordinary floors, the chinks and cracks of which must retain many particles of dirt notwithstanding the most vigorous sweeping and cleaning.

Clinical lectures on surgery are delivered in the hospitals several times during the week; but how different they are from American hospital clinics, where we see classes of three hundred to four hundred students assembled in spacious amphitheatres! Here the classes are very small, as must needs be, since they consist only of the students of each respective hospital. The lecture-room does not contain seats, but is arranged in a series of ascending steps, on the edge of which is fastened a railing four feet high; upon this the *standing* student leans while watching the operator. I was going to say lecturer, but it would scarcely be correct to apply that term to one who says so little. This is the programme:—the patient is brought into the arena and placed on the table; the surgeon enters, perhaps fifteen or twenty minutes late; states the disease and the operation proposed; and then goes on with it to completion without saying a word. There is no discussion of differential diagnosis, the various modes of operating, or the regional anatomy; and consequently the student sees merely the cutting and suturing, and, if a first-course man, learns nothing.

So much for English clinics, which are far inferior to our own; but the training in the hospital medical schools seems, on the contrary, to be very thorough. Besides the seven regular branches, the curriculum embraces lectures and instruction in pathology, both didactically and in the post-mortem room, botany, practical physiology, practical chemistry, and dental surgery. In addition, the pupils have the opportunity of obtaining much clinical experience by filling the positions of dressers, clinical assistants, and, finally, of house physicians and surgeons. In this way not only does the student gain a practical knowledge of his profession, but the hospital wards come under the supervision of men who have been trained for the higher positions by a period of probation in the lower.

Although the student is instructed in some hospital school, he does not obtain his diploma therefrom, but, having studied for four years, and having passed a preliminary examination in arts, which is absolutely essential, he applies to the University of London, the Royal College of Physicians, the Royal College of Surgeons, or the Society of Apothecaries, for examination and a license to practise. The University of London is the only examining body in the city which confers the degrees of Bachelor of Medicine, Bachelor of Surgery, Doctor of Medicine, and Master in Surgery; the others giving merely licenses to practise, diplomas of membership, etc. The preliminary examination in arts spoken of above embraces the ordinary English branches, chemistry, Latin, and, sometimes, Greek. By this method the standard of scholarship is placed higher, and no man is allowed to practise medicine who does

not possess ordinary scientific knowledge. The degrees of Doctor of Medicine and Master in Surgery are conferred upon those who, after five additional years of study and practice, are found capable of passing the requisite examination. Thus you see that doctors are much less easily made in England than in America; and it is easy to understand the ready sale of bogus diplomas in the former country.

JOHN B. ROBERTS.

NEW YORK, September 7, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The dulness of the long summer vacation still seems to be over everything here; but already the early notes of preparation have begun to be heard in our midst, and there are not wanting indications to show that in another fortnight the medical world, like the rest of human kind, will have become roused to its accustomed activity.

Most of our prominent practitioners have already returned to town, or will do so very shortly; though Professors Sands and Fordyce Barker and others who have been abroad for the summer are not expected back until a little later.

By those who have been away for any length of time, some changes will be noticed about the city. The new building of the Medical Department of the University of New York, situated at the foot of East Twenty-sixth Street, in the immediate vicinity of the old college, has been rapidly pushed forward to completion, and now stands ready for occupancy.

It is of brick, with handsome brown-stone facings, and is a substantial and capacious structure, though architecturally quite inferior to the new buildings of the Medical Department of the University of Pennsylvania. The arrangement of the interior, however, is very admirable, and its appointments will, no doubt, be the most complete of any medical college in New York.

Work has also been steadily progressing on the new building of the New York Hospital Society, on Fifteenth Street near Fifth Avenue, and the first story is now up. The hospital will be about one hundred and fifty feet long by one hundred feet deep, and its estimated cost when completed and furnished, exclusive of the price of the land, is four hundred and thirty-five thousand dollars.

This building is being constructed in accordance with the plan for the resumption of hospital operations suggested by a special committee of the Board of Governors appointed to report upon a site for hospital buildings, and the general principles which should control the Board in its selection and in the construction of the necessary buildings.

The recommendations of the committee, the conclusions of whose report received the unanimous approval of the Governors, are based upon the following facts:

1. That additional large general hospitals are not at present required in the city of New York, the accom-

modations of such existing institutions, with the exception of Bellevue, being largely in excess of their use by the sick poor; and that the failure of this class to avail themselves of the superior privileges of these institutions arises from the inability of the poor to pay the very moderate hospital charges for their treatment and support while patients, and the insufficiency of means of the hospitals to support more than a very limited number of free patients.

2. That the concurrent testimony of all conversant with the requirements of the city south of Twenty-third Street establishes the fact that there is pressing need in that locality of hospital accommodations for the immediate relief of sufferers from accident and sudden acute sickness.

3. That small hospitals, with twelve beds each, a resident physician and surgeon, two nurses, and the necessary subordinates, established at proper distances, could be conducted at a comparatively small expense, relieving all applicants from a prescribed locality, and, if need be, accommodating such as could not be immediately moved, until able to be transferred without risk to a general hospital.

4. That the Society of the New York Hospital is now in a position to inaugurate such a system of hospital treatment, and that no more economical and beneficial application of its funds can be made at the present time.

5. That a central establishment, having also accommodations for the executive officers of the Society, the hospital library, pathological cabinet, and for the meetings of the Board of Governors, is essential to the prosecution of the system of relief indicated.

In accordance with these views, the Society purchased five lots on Sixteenth Street, including the old Thorne Mansion, a handsome brown-stone building, with ample room for the library, pathological cabinet, and executive officers, and also a number of lots immediately in the rear, on Fifteenth Street, upon which the new hospital building is now being erected. The cost of this property amounted in all to three hundred and fifteen thousand dollars.

Early in the summer the first of the small branch hospitals was opened down town, in the vicinity of the City Hall, the Society having obtained from the city the use of a building which was formerly, we believe, a precinct station-house; and since then it has been doing excellent service in the reception of accident and emergency cases.

Until October last the use of the New York Hospital Library had been confined to the physicians and surgeons on the staff of the hospital and the annual subscribers, and the library was open for consultation only a few hours daily. Since its removal to the spacious rooms in the building on Sixteenth Street, however, it has been made free to all, and the hours of admission have been extended so that it is open daily for consultation from 10 A.M. to 10 P.M., with two brief intermissions, while the profession have shown an increasing appreciation of the privileges thus afforded them. In

the extent of its collection this library is second only to that of the Surgeon-General's office, Washington, and that of the Pennsylvania Hospital, Philadelphia. At the beginning of the present year it contained nine thousand six hundred and forty-five volumes, three hundred and thirty of which had been added during 1874.

The pathological cabinet is also in a flourishing condition, and has recently received quite a liberal endowment from Mr. Robert Ray.

Our grand new post-office was occupied for the first time last week, and thus far only two sources of dissatisfaction in regard to it have manifested themselves,—viz., a pie-stand desecrating its massive corridors, and the lack of ventilation in the basement. The first of these nuisances has already been abated by the prompt interference of the Postmaster-General himself, and it is to be hoped that the other abuse will also soon be corrected. It is gratifying to hear that ventilation has at last come to be considered a very important element in the construction of every new building, and every accomplished architect is at least supposed to be thoroughly acquainted with the subject; though, alas, how seldom it is that we meet with any much-frequented edifice in which there is a constant supply of pure, fresh air!

Of churches, that of the Rev. Dr. John Hall, now approaching completion at the corner of Fifth Avenue and Fifty-fifth Street, will, without doubt, be the most completely ventilated of any on this continent, if the elaborate system designed by the architect (who was also the architect of Roosevelt Hospital) can be successfully carried out. The interior of the building was really finished last spring, but it will be necessary to see how the ventilation stands the test of the winter season before judgment can be finally passed upon it. This church is one of the largest in the city, costing, it is said, over a million of dollars altogether. The auditorium is one hundred feet deep on the main floor, one hundred and thirty-six feet deep on the gallery, eighty-five feet wide, and sixty feet high, with seats for two thousand persons. It has been the aim of the architect to produce a building which should be as perfect as possible as to facilities for hearing and seeing, and to secure for each listener the utmost comfort in respect to such matters as heating and lighting, as well as ventilation.

There are twenty-four large and twenty-four small windows. Each window has two sets of sashes, glazed, with stained glass, and with gas-jets between them. The space between the two sashes is a large ventilating flue, drawing the air from the church through the perforated panels of the wainscoting, the current being increased by the heat of the gas-burners within the space. Every gas-burner in the church is hidden by ornamental glass-work, giving a mellow light which is most grateful to the eye, and is also supplied with ventilating flues.

An air-tower at one corner of the building supplies pure air, which is drawn by a fan in the cellar, at the

base of the tower, that is worked by a ten-horse-power steam-engine. Ten feet above the floor of the tower, inside, a perforated water-pipe extends around the walls, making a shower to cool the air in the summer, and free it from dust, if necessary. The entire cellar floor can also be sprinkled to cool the air. The fan is of iron, seven feet in diameter, and can make two hundred and twenty revolutions in a minute, forcing thirty thousand cubic feet of pure air into the church during that time. The entire cellar is an air and heating chamber, into which the fan delivers the air, the ceiling being covered with a net-work of steam-heating-pipes.

Before the air enters the auditorium, it passes over the steam-pipes, and is warmed. The warm air enters the body of the church through movable slats in every pew, and every person in the pews can have warm or cold air at his feet, as he chooses. When cold air is forced into the auditorium, it enters fifty feet above the heads of the congregation, so that there can be no draught. The steam for heating is generated in two fifty-horse-power boilers.

The public schools reopened yesterday, and there is reason to fear that they will now be more overcrowded than ever, on account of the enforcement of the Compulsory Education Act. Few, if any, of our school-houses are scientifically and adequately ventilated, and there can be no doubt that the health of many of the children is perceptibly affected in consequence. There are other evils also, besides the lack of ventilation, which seem, unfortunately, only too prevalent even under the best systems of common education, and yet which could be very easily remedied. In Germany the increase of myopia among school-children has been shown to depend in great part on badly-lighted study-rooms, unsuitable seats and desks, too long continuous hours of study, and a confined range of vision. Examinations of schools in Europe in order to determine the refractions of scholars' eyes have of late years been of quite frequent occurrence; and in imitation of the labors of Jager, Cohn of Breslau, Erismann and Dobrowsky of St. Petersburg, Hofman of Wiesbaden, and other European oculists, Dr. Callan, of this city, Assistant-Surgeon to the New York Eye and Ear Infirmary, conducted during last spring and the early summer a series of examinations on the eyes of school-children here. For this purpose he selected pupils from the colored schools, and for the following reasons. Heretofore nearly all the examinations have been made in Germany, and, needless to remark, on whites. It is, to most, familiar that there is a very large percentage of myopia among the students in the gymnasiums and universities there. The Germans acquire myopia by their long years of study, having perhaps inherited a predisposition to it, or inherited it already developed. Our colored brethren, as a rule, never did enjoy a thorough system of education. The present generation in New York may be said to enjoy as thorough as the city affords; but their forefathers did not. Neither have they been raised to such pursuits as demand a very close application of the eye, such as engraving, etc.,

and therefore, *ceteris paribus*, the negro's eye should approach nearest to a natural eye, *i.e.*, the normal eye. The very best material for examinations of this kind could be obtained in the Southern States, where, until of late years, the negro was unjustly debarred from the luxury of spoiling his eyes in the attainment of a modern education.

In these examinations each scholar was placed thirty feet distant from test-types (Snellen's) on the wall of the study-room, and each eye alternately tested on card "A," for example, the result being noted. Then convex and concave glasses were placed in turn before each eye, and the pupil was asked to read card "E." "Cohn was very fortunate," says Dr. Callan, "in being able to examine two hundred and forty scholars' eyes under the influence of sulphate of atropia, an opportunity that does not present itself very often; and such a procedure was entirely out of the question in the present instance, particularly as the colored children feared from the first that their eyes were, by a species of legerdemain, to be taken out and then replaced,—a belief, by the way, which is not confined to colored children, but is also shared by some very large children of the Caucasian race. Not being able to put atropia into the scholars' eyes, we put it in our own, so as thoroughly to paralyze the action of the ciliary muscle, and kept our eyes in that condition during the ophthalmoscopic examinations. Each scholar's eyes were separately examined with the ophthalmoscope in the upright image, and the correcting-glass, used to view the fundus distinctly, gave the refractive condition of the examined eyes. In this manner the examination was made with all due accuracy. Our eyes being under the influence of atropia, we were not able to use our accommodation, and the glass used to see the fundus gave the desired refraction."

The ophthalmoscopic examinations were made in the forenoon, and extended over a period of five weeks, during which time both eyes of the examiner were under the influence of a four-grain solution of sulphate of atropia applied three times daily, so as completely to paralyze the accommodation. Two public schools were examined, both together containing 457 scholars. The following is the result of the examination: 431 emmetropic, 94 per cent.; 12 myopic, 2.6 per cent.; 14 amblyopic, 3 per cent.

Public School No. 3 contained 293 scholars; 274 emmetropes, 10 myopes, 9 amblyopes.

Public School No. 4 contained 163 scholars; 156 emmetropes, 2 myopes, 5 amblyopes.

School No. 3 had a percentage of 3.4 per cent. myopes, while School No. 4 had only 1.2 per cent. myopes. The explanation is that School No. 4 has only a local attendance, while School No. 3, which has an excellent corps of teachers, and is really the colored high school, is frequented, in consequence of its superior advantages, by children of well-to-do parents from all parts of the city proper, as well as Manhattanville and Harlem.

Dr. Callan is fully satisfied that, had he examined an

equal number of white scholars, a much larger percentage of myopia would have been shown than that found among the colored children, *viz.*, 2.6 per cent.

The effect of the recent high temperature on the mortality of the city is seen in the fact that 674 deaths were reported during last week, against 592 reported the week previous, when the weather was cool. The extra corps of vaccinators have still continued their work, and during the month of August made over ten thousand vaccinations. As a direct result, we find smallpox steadily diminishing, and during the week ending August 28 there were only twenty-six cases reported. For the same week, the number of cases of diphtheria ran down to thirty-nine; the disease causing but twenty-three deaths, the least number of any week in the year. Smallpox caused fourteen deaths during the last two weeks of August,—also the least number of any fortnight in the year. The Registrar of Vital Statistics reports that in the week ending August 28 there were thirty-four deaths from bronchitis and pneumonia, thirty-nine in the previous week, thirty-four in the second and forty in the first week in August; and that in these four weeks the least mortality in the year was registered from these two diseases; so that we have some offset at least to the increased infant mortality from diarrhoeal maladies.

PERTINAX.

REVIEWS AND BOOK NOTICES.

CANTHOPLASTY AS A REMEDY IN CERTAIN DISEASES OF THE EYE. By C. R. AGNEW, M.D. New York, 1875.

This pamphlet of only ten pages is a brief but clear statement of the conditions which, in the author's experience, have been benefited by canthoplasty. It is stated to be of great therapeutic value, especially in cases of recurring strumous ophthalmia which have proved rebellious to general therapeutic measures. In one hundred and ninety-one cases tabulated on the tenth page, it seems, however, to have been employed quite as frequently in conditions not necessarily strumous, but in which the general indication of relieving the cornea from undue pressure or unfavorable contact with the lids was presented,—*e.g.*, in granular lids, pannus, keratitis, ulcerative or not, distortions of the lids, blepharospasm, and panophthalmitis. The author's method of performing the operation is very carefully stated, the description being aided by five illustrations on wood. His method differs from that usually employed only in his care to divide the upper tarsal ligament. That Dr. Agnew recommends it is much in its favor, and will secure for canthoplasty a trial by those not already in the habit of employing it.

OTITIS. By C. R. AGNEW, M.D. A Lecture extracted from the series of American Clinical Lectures.

In this very readable pamphlet, Dr. Agnew sets forth in plain language (not for experts, but for the general practitioner) the dangers of relying upon ordinary antiphlogistic measures in the treatment of acute inflammatory conditions of the outer and middle ears. He directs attention to the necessity of early incisions and repeated leechings and inflation of the middle ear. He advises in cases of measles and scarlet fever that the ear be examined daily. The lecture is preceded by a dissertation of a somewhat elaborate character,—more

valuable to the layman, we should judge, than to the physician,—“on taking cold.” Dr. Agnew is an advocate of total abstinence as a preventive of “taking cold,” and strongly advances the claims of coarse farinaceous food, such as wheaten grits. Of the latter he says, “Their mechanical contact with the digestive organs does for them a work something like that which friction of the skin with the ‘hair mittens’ does for the surface of the body in hastening the desquamation of effete and sickly epithelium and the cleansing of follicles.”

MANUAL OF COMPARATIVE ANATOMY AND PHYSIOLOGY.
By S. MESSENGER BRADLEY. Third Edition. Lindsay & Blakiston, 1875. Pp. 262, 12mo.

This little volume presents a faithful exposition of the subjects treated of under the above title. As can be inferred from the size of the volume, the matter is compressed, the style employed not permitting any other than the most succinct statement of facts. The work is designed especially for preparing English students for their examinations. We are therefore prepared to see the chapters on the vertebrata very full; indeed, they occupy the latter half of the volume. The illustrations are not of the highest order of excellence, but, in a work of so little pretension, this is, after all, no great defect.

GLEANINGS FROM OUR EXCHANGES.

MERCURIAL BATHS IN SYPHILIS (*The Lancet*, August 21, 1875).—Mr. Henry Lee describes as follows the plan of administering the mercurial vapor-bath, which he extols highly as comprising, in many respects, the greatest therapeutic advantage with the least possibility of unpleasant effect.

A lamp, in which the methylated spirits of wine is burned, is put into a case, made principally of wire gauze, on the principle of the Davy safety-lamp. The top of the case is fitted with a central, movable, small circular plate, surrounded by a trough, which should contain one ounce of water only. The water should be boiling when first put in, or should be allowed to remain over the lighted lamp until it begins to boil. Thirty grains of re-sublimed calomel are then spread out on the central small circular plate. This should be quite dry. The patient then sits, without his clothes, on a small stool or chair, and the lamp is placed between his legs. A cloak made of moleskin or of some thick material is then made to cover the whole apparatus, and is tied round the patient's neck. It is important that the cloak should go quite down to the ground all the way around. As the water boils, a certain quantity of steam is enclosed within the cloak, and a little later the vapor of the calomel as it rises passes through the steam and becomes mixed with it. The water first disappears, and the calomel is sublimed in from ten to fifteen minutes. The patient then gets into bed with the cloak on, so as to make it his night-dress. In this way the calomel is necessarily kept on the surface of the skin. The cloak used is furnished with a cane hoop, so as to be kept away from the skin during the action of the bath, and this hoop may be removed as soon as the bath is over, and replaced again before the bath is used the next night. The cloak has a slit in front, which the patient is generally directed to open for about an inch, so as to allow some of the vapor to escape. This rises in front of his mouth and nose, and he is directed to inhale it for a minute at the expiration of each five minutes during the continuance of the bath, so as to breathe the vapor for about three minutes altogether. The patient during this time keeps his head up, so that the moistened calomel vapor passes for about six inches through the

common air before it is inhaled. This inhalation is not always necessary, but it furnishes a means of regulating with the greatest nicety the action of the mercury, as indicated by its effects upon the gums. He has never found mercury administered in this way produce salivation where patients had not also taken it in some other form. The action is upon the surface of the body, and the internal parts are comparatively unaffected. No diarrhoea is produced except from some accidental cause. The stomach and intestines are not irritated, and are free for the use of food or medicine. The perspiration produced amounts only to a slight moisture on the skin, and when this is the case the patient very rarely experiences any debilitating effects from the continued use of the bath. During this treatment Dr. L. generally recommends patients to abstain from taking vegetable acids; and for this purpose, as a rule, they are told not to eat raw vegetables or raw fruits, such as salads, cucumbers, celery, apples, pears, and oranges. As the object is to have the calomel in contact with the skin, the patient washes only as much as may be necessary.

NITRITE OF AMYL IN SEA-SICKNESS (*The Lancet*, August 21, 1875).—Dr. Crochley Clapham, believing the proximate cause of sea-sickness to be an undue congestion of the vessels of the spinal cord, has tried to remedy this condition by the use of nitrite of amyl in one hundred and twenty-four cases; one hundred and twenty-one of which proved eminently satisfactory, there being no return of the malady after the administration of the nitrite. The remaining three cases were only unsuccessful in so far as they required a further dose or two of the remedy.

The mode he adopts of exhibiting the drug is by inhalation, three drops of the nitrite being poured on a handkerchief and held *close* to the patient's nose. The inhalation must be conducted rapidly, so as to give the full influence to the drug without a *too free* admixture of air.

The action of the remedy in freeing the circulation and relieving the hyperæmia of the spinal cord will be quickly evidenced by a throbbing sensation in the temples (occasionally rather disagreeable), and by a more or less general flushing and increased warmth of the surface of the body. This warm and comfortable glow, which takes the place of the chilly sweat so disagreeable in this disease, is usually followed in the course of half an hour by a pleasant slumber, from which the patient wakes to eat a hearty meal. Should the sickness recur, which it may do after the lapse of twenty-four hours, the inhalation must be repeated. The patient should be in bed when under treatment, so as not to interfere with the subsequent sleep; and it is usually better to allow one fit of vomiting to take place before applying the remedy, not only to insure the *bonâ fide* character of the seizure, but also because it is advantageous unless the patient be in a very weak state of health. He met with only one case in which the medicine was refused on account of disagreeable effects, and in this instance, which occurred in the tropics, the patient complained that “it made him feel so hot he would rather be sea-sick.”

CASE OF DISLOCATION OF THE ASTRAGALUS (*The Boston Medical and Surgical Journal*, August 26, 1875).—Dr. David W. Cheever reports the case of a man who fell about twelve feet, alighting on his feet, and injuring the left foot severely. There was no distortion, crepitus, or mobility above the ankle. Both malleoli were in place; and firm. There was a bony crepitus at the neck of the astragalus. There was a very marked, partly rounded, and partly sharp projection of bone between the inner malleolus and the heel. There was a depression beneath the outer malleolus. The rest of the

tarsus and metatarsus seemed normal. The tendo Achillis was drawn tense, and shortened, over the unnatural prominence of bone which lay between the inner ankle and the heel. The heel was drawn up. The mobility of the ankle-joint was largely diminished. The last joint of the great toe was strongly and immovably flexed at a right angle.

The diagnosis was a fracture of the astragalus at its neck, and a dislocation of the whole body of the astragalus from between the malleoli and os calcis, inwards and backwards.

Attempts were made with extension and counter-extension, and by alternately flexing and extending the foot, to press the bone back into its place, but without any effect. Tenotomy of the tendo Achillis, the tibialis anticus, the tibialis posticus, and the flexor longus digitorum was then resorted to, but also unsuccessfully. The foot was then secured immovably in a carved outside Pott's splint, and the leg laid upon its outer side. The tenotomy punctures were covered with plaster, and the joint and dislocation dressed with a lotion of equal parts of laudanum and cold water. Ulceration and sloughing took place, but there was no abscess, caries, or necrosis, and the patient recovered with a tolerably useful foot.

A CASE OF POPLITEAL ANEURISM CURED BY AN EXTEMPORIZED COMPRESSOR (*The Lancet*, August 21, 1875).—Mr. Nathaniel Alcock reports a case of popliteal aneurism occurring in a woman, æt. 38, and in which treatment by means of Carte's tourniquet and flexion had proved unavailing. It was remembered that Dr. Bellingham had found the weight of a conical piece of lead to be borne when no instrument would be submitted to. A tin funnel was procured, and a cork inserted into the narrow end and covered with a soft pad. The funnel was then filled with shot, and the whole enclosed in a calico bag to prevent the shot from escaping. The funnel was then placed over the femoral at the fold of the groin, the exact position of the vessel being indicated by a piece of soap-plaster, spread on leather, pasted over it, and additional shot was poured into the bag until the circulation was completely stopped; the limb was unbent to relieve the acute pain in front of the knee, and the weight was held in this position for twelve hours and a half without the slightest variation. At the end of that time all pulsation in the tumor was at an end, and the aneurism was cured.

For two days the funnel was applied for a few hours each day to secure the full contraction of the clot, and then was finally omitted. The total weight of the loaded funnel was six pounds two ounces.

The collateral circulation was so effectually developed that the temperature of the limb was not at any time perceptibly lowered, nor has any inconvenience arisen from occlusion of the main artery. The tumor was reduced to the size of a small walnut, and is perfectly solid.

TETANUS FOLLOWING MËNORRHAGIA WITH PURPURA HÆMORRHAGICA—HYPODERMIC INJECTION OF CHLORAL—CURE (*The Obstetrical Journal*, August, 1875).—Dr. Ribell relates the case of a patient, æt. 36, who suffered from purpura hæmorrhagica after each of her four confinements. Nine weeks after her last one, severe rigors set in, followed by contraction of the muscles of the neck, stiffness, and difficulty in deglutition, with slight trismus. The symptoms increased rapidly, and left no doubt as to their nature. Fifteen-grain doses of chloral every half-hour were given for three hours, when sleep supervened, and lasted five hours. The symptoms returned when the patient awoke, and gradually increased in severity, pains in the back and suffocation being complained of. Thirty grains of chloral in solution were injected into the side of the

neck, and repeated every hour for six hours. Sleep then occurred, and lasted nine hours, the patient awakening free from all symptoms. Two hundred and ten grains in all were injected. Convalescence was slow.

BLINDNESS AND DEAFNESS DUE TO TAPE-WORM (*Boston Medical and Surgical Journal*, August 19, 1875).—Dr. Williams reports the case of a child of eight years, puny but in fair health. It had suddenly lost its hearing six weeks previously. Four weeks before, that is, a fortnight after the deafness, it had in one day lost its sight. For a day blindness was complete; then for a time there occurred successive intervals of sight and blindness. If any one whom the child knew brought his eyes close to it, it would catch the expression of the eyes and show recognition, but it recognized no other light, however bright. The ophthalmoscope showed no local trouble or cerebral lesion. There were signs of tape-worm present, and the loss of the two functions could be attributed only to reflex action. There had been no vomiting. On the removal of the worm both sight and hearing completely returned.

MISCELLANY.

MEDICINE IN INDIA IN THE OLDEN TIME.—Meanwhile, we are grilling in India, where two hundred years ago there were no physicians, excepting those attached to royalty, the poor people consigned to herbalists. When a potentate had migrains, neuralgia, or headache after salmon, he was bled in four places under the tongue to the extent of eight ounces, received into four golden porringers. The queen's tongue could only be seen protruded through a curtain, her royal pulse felt through lawn, whilst for venesection a jewelled, well-turned, shapely arm would just peep through silken or velvet hangings of crimson, purple, green, and gold, the rest of the body concealed behind the arras. One grandee had ten Persian physicians, the senior a man of jealous temperament, who threw his pretty wife over the castle battlements to cure her of flirting. The lady only broke her ribs. The indignant public cried shame unto him; so the physician, packing up goods, chattels, and wounded wife, sold his practice and left the place. He had not travelled far when the monarch, taken ill, probably from delirium tremens, ordered his recall. Promptly stabbing wife, four children, and thirteen female slaves, by way of standing up for professional dignity, the doctor returned to work, resuming brass plate and night-bell, probably publishing the whole correspondence in the *Delhi Medical Gazette* under the head of ethics.

These physicians, cognizant of Ganges water causing diarrhœa, always praised wells in preference; and in the history of every nation, from the earliest records, the water theory, under the designation of poisoned wells, stands prominent also. So far back as the days of Plutarch the operation for laryngotomy was performed when a fish-bone stuck in the throat. Aurungzebe, of Delhi boil celebrity, suddenly took to drinking water, to living on barley bread or millet, and to lying on the ground with a tiger-skin only under him, and thus fell

ill in 1665, the celebrated comet year. An aged, tottering monarch fell violently in love with a girl of thirteen, and, consulting the advertising silent friends of the day, they nearly killed the wicked old gentleman with nervine tonics and electro-curative restorers, which in modern days have been well exposed in the "Revelations of Quackery" by Mr. Courtenay.

Tavernier, the jeweller, who described the Koh-i-nor, tells curious tales, for instance, of Goa, where the hospital patients mostly came out in their coffins after treatment by blood-letting, beef-broth, rice, sweetmeats, and three glasses of cow's urine daily; of the barbarities practised on eunuchs, some terribly mutilated, everything cut off flush with the belly, the bladder and urethra seriously injured; of the Persian climate, free from variola, yet up to the age of twelve conducive to eczema; no grit or gravel, except for the intemperate, and, thanks to the dry air, the cases of secondary syphilis very mild. Colic treated by hog's flesh; dysentery by curdled milk, rice, and rhubarb; and fever involved twelve days' hard tea-drinking, the diaphoresis turning everything yellow, even the walls of the sick-chamber. —*Indian Correspondence of the Medical Press and Circular.*

PROSTITUTION IN BUENOS AYRES.—Buenos Ayres has established a law governing prostitution, which resembles in its general characteristics the laws adopted in other countries,—viz., in requiring an examination of the registered prostitutes, imposing fines on clandestine prostitutes and upon men who cohabit with them, and in the absence of any inspection of the physical condition of men resorting to houses of prostitution. —*Medical Press and Circular.*

SIR CHARLES LOCOCK, who died on the 23d of July last, aged 76, won his high place in rather a peculiar manner. Thoroughly but not liberally educated in his profession, possessing no brilliant reputation in the field of medical literature, his success rested almost solely upon such a union of moral and intellectual attributes as fitted him to shine as a fashionable physician.

KILLING TWO BIRDS WITH ONE STONE.—A clergyman who suffered severely from asthma was one day compelled to open a bottle containing the odoriferous pouches of the skunk, in order to relieve himself, while in the pulpit, of an impending attack. The effect was to drive his congregation out of church in a body. (See Wood's "Natural History," vol. i. p. 377.)

THE Georgia State Board of Health is now fully organized, with Dr. V. H. Taliaferro as secretary.

NOTES AND QUERIES.

OBITUARY.

DR. W. W. HOUSEMAN, aged 22 years, died September 7, 1875, of typhoid fever.

He was a graduate of Jefferson Medical College, and Resident Physician of Blockley Hospital. His young life was full of zeal for the work that had been early marked out for him. His bearing in the competitions of

the class was characterized by a modest fairness, a sympathetic glow for his less-favored companions, and a manly endeavor to remedy his own defects.

Thoroughness, by painstaking labor, was his lever of success; but along with this he had a wonderful love and ability for his calling, which certainly promised much for the profession as well as for himself. This completeness of character was exhibited in all his intercourse by a high moral and social deportment. While it cannot but be regretted that so many bright hopes and promises are so soon withered, yet the example he has left commends itself to his companions and associates.

With a well-trained and disciplined mind he entered upon the study of his profession. By a careful and diligent use of all the advanced means for acquiring knowledge, he won the esteem of all his teachers, and took a high standing in his class. At the close of his college course he entered the hospital with his usual energy.

It was while in the pursuit of these cherished aims and in the path of duty that he was taken with disease, which has cost him his life. But even here there is a bright side, and we can leave him safe in a Christian faith.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—At a meeting of the Resident Physicians of the Philadelphia Hospital, held Wednesday, September 8, 1875, the following preamble and resolutions were adopted:

"Whereas, It has pleased God in his wisdom to remove from our midst our friend and fellow-laborer, W. W. Houseman, M.D.; therefore be it—

"Resolved, That, while we bow in humble submission to the will of our Heavenly Father, we deeply lament the untimely death of our late friend and associate, whose manly and amiable qualities have endeared him to us and won for him the affection of all who knew him.

"Resolved, That the Medical Staff of the Philadelphia Hospital has lost in him one well qualified to fill the arduous duties of the post which for so short a time he held.

"Resolved, That we extend our most earnest and heartfelt sympathies to his family in their affliction.

"Resolved, That a copy of these resolutions be presented to the family."

JOSEPH BERENS,	L. H. A. NICKERSON,
A. A. McDONALD,	H. A. SMITH,
S. R. GORGAS,	C. W. DULLES,
S. S. DEASE,	A. W. RANSLEY,
H. W. STELWAGON,	W. H. RUSH,
J. F. EDWARDS,	
Resident Physicians, Philadelphia Hospital.	

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 7, 1875, TO SEPTEMBER 13, 1875, INCLUSIVE.

MILHAU, J. J., SURGEON.—Relieved from duty at Fort Columbus, New York Harbor, and granted leave of absence for six months. S. O. 183, A. G. O., September 11, 1875.

SMITH, A. K., SURGEON.—Relieved from duty in Department of the Missouri, and assigned to duty at Fort Columbus, New York Harbor. S. O. 183, c. s., A. G. O.

HEGER, A., SURGEON.—Relieved from duty in Department of Dakota, and assigned to duty at Willet's Point, New York Harbor. S. O. 182, A. G. O., September 9, 1875.

WEEDS, J. F., SURGEON.—Granted leave of absence for one month, on Surgeon's Certificate of Disability. S. O. 128, Department of the South, September 8, 1875.

BROOKE, JNO., ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of the South, for assignment to duty. S. O. 182, c. s., A. G. O.

MONROE, F. L. B., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, to report to the President Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General, Department of Dakota, for assignment to duty. S. O. 182, c. s., A. G. O.

KIMBALL, J. P., ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 97, Military Division of the Missouri, September 8, 1875.

BYRNE, C. B., ASSISTANT-SURGEON.—Relieved from duty at Willet's Point, New York Harbor, to report to the President Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General, Department of Texas, for assignment to duty.

SATURDAY, SEPTEMBER 25, 1875.

ORIGINAL COMMUNICATIONS.

A CASE OF RETRO-PHARYNGEAL ABSCESS.

BY WILLIAM PEPPER, M.D.,

Physician to the Children's Hospital, etc.

INSTANCES of this dangerous affection are so comparatively rare that a certain amount of interest must attach to every case. The name—retro-pharyngeal abscess—is applied to collections of pus forming in the connective tissue between the mucous membrane of the pharynx and the vertebral column. Such abscesses occasionally occur in cases of caries of the bodies of the cervical vertebræ, the pus being prevented from burrowing up and down along the spinal column by adhesions. In other instances, the abscess follows one of the specific fevers, especially those which, like scarlatina or diphtheria, are attended by inflammation of the fauces and pharynx. It is probable that this sequela is more apt to be developed in children of a scrofulous diathesis, in whom the tendency to suppurative inflammation is so marked. Retro-pharyngeal abscess may, of course, occur at any period of life, but, as will be inferred from the causes which have been mentioned, it is very much more frequently met with during the first decade of life. In the following case the affection was developed during advanced convalescence from a very dangerous attack of naso-pharyngeal diphtheria.

Rose L., æt. 32 months; born of very healthy parents. She was attacked with severe faucial and pharyngeal diphtheria on February 7, 1875, the evening preceding the day on which her elder sister died with an attack of nasal and laryngeal diphtheria. No unfavorable symptoms developed themselves; the membrane disappeared from the sixth to the ninth day, and she was quite well by the end of the second week. The treatment comprised large doses of quinia, chlorate of potassium, and muriated tincture of iron; and locally, the application once a day of dilute tr. ferri chloridi by a brush, and the frequent inhalation of lime-water from a steam-atomizer. During the month after convalescence she continued the use of tr. nucis vomicæ and tr. cinchonæ comp. Some slight enlargement of the post-maxillary glands persisted, but she seemed to be improving satisfactorily for six weeks, and I had not visited her for a week, when, on April 6, she was brought to my office looking poorly, and holding her head constantly far inclined towards the left shoulder. Any attempt to move it caused violent crying; the left sterno-cleido-mastoid and left border of the trapezius were rigidly contracted. There was no increase in the slight swelling of the cervical glands, nor any symptom to attract attention to the fauces, and the attack seemed to be rheumatic in character. Two days later she was again brought to my office, when there could be detected increased enlargement of the post-maxillary glands on the left side, and some fulness about the angle of the jaw. The head was still held strongly flexed towards the left. There was no difficulty in swallowing, but examination of the throat showed a swelling on the posterior wall of the pharynx quite high up on the left side. External applications of compound iodine ointment were directed; a solution of forty grains of nitrate of silver

to the fluidounce was applied to the throat, and syr. ferri iodidi ordered internally with full doses of quinia. For the next four days the symptoms grew more serious. She rapidly lost flesh, and failed in spirits and animation. There was constant fever, with tendency to cold sweat at night. She continued to drink milk and beef-tea freely, from thirst apparently; and deglutition was not difficult. Her breathing was constantly very rapid and labored, with play of the *alæ nasi*. When she was laid down to sleep her breathing became very noisy and snoring, and rapidly grew more and more labored and imperfect, so that it was necessary to rouse her frequently during the night for fear of fatal embarrassment in breathing. On several occasions, the parents' alarm was so great that they gave repeated doses of syr. ipecac until free vomiting occurred, when partial and temporary relief was obtained. The spray of warm lime-water was also freely thrown into the fauces every three hours by a steam-atomizer, and with evident relief, as the little patient seemed to desire its frequent repetition. During the day the symptoms were much less severe, and the child would walk about, or even play a little. The swelling in the pharynx manifestly increased, and did not seem to extend below the level of the epiglottis. In the upward direction, the finger could detect that it bulged above the level of the roof of the mouth. It occupied the left side of the pharynx, projecting from behind the left posterior half-arch nearly to the median line. The mucous membrane covering the swelling, as well as the surrounding parts, was deeply congested; there was, however, no evidence of any tendency to point. The sense imparted to the finger was one of elasticity without any distinct fluctuation. During these four days the child's strength failed rapidly. The expression grew haggard and anxious, with constant play of the *alæ nasi*, and labored, noisy breathing. The inspiration was especially difficult, and was attended with marked recession of the base of the thorax and violent action of the superior muscles of respiration. The surface was deathly pale, and at times, especially during the night, was bathed in cold sweat. In addition to the other treatment, which was persisted in, hot flaxseed poultices were kept over the left side of the neck and jaw; milk-punch and beef-tea were freely administered.

On the evening of April 12, as the symptoms grew more and more alarming, without any more decided sign of pointing of the swelling, I plunged a tenotomy-knife into it, and made an incision not more than one-third of an inch long. There was an immediate gush of blood, with a small quantity of pus mixed with it; gentle pressure was exerted on the swelling by the finger, and it was found to be very considerably reduced.

The succeeding night was passed much more easily; the treatment was maintained, and gentle pressure was made morning and evening over the swelling. In addition to this, the throat was thoroughly atomized with lime-water three or four times in the twenty-four hours, with manifest relief. About forty-eight hours after the operation, a more free discharge of pus was obtained by pressure than previously, and thenceforward the diminution in the swelling and in the alarming symptoms was rapid and steady.

The pharyngeal swelling subsided in the course of three or four days; the enlargement of the glands on the left side disappeared rather more slowly. The rigidity of the neck was almost immediately relieved, and in the course of a week, despite some irregular febrile action which required antiperiodic doses of quinia for its arrest, the child was quite well.

It will be noted that in this case the abscess occupied a rather higher position than usual, being seated above the level of the glottis. In conse-

quence of this, the train of symptoms which was present differed in some important respects from the ordinary features of retro-pharyngeal abscess; and, as the recognition of the nature of such cases is very essential, I would direct especial attention to these peculiarities.

The symptoms by which this affection is usually distinguished are, fulness behind one or both angles of the jaw; stiffness of the neck, with retraction of the head; great and increasing difficulty in swallowing; difficulty of breathing, chiefly marked in inspiration, with noisy, snoring sound; and, finally, a prominent swelling at some point of the posterior wall of the pharynx, which may be both seen and felt. In addition, there is irregular, sometimes only slight fever, with great restlessness and general distress.

The diagnosis is always difficult at first, before the development of dyspnoea and dysphagia; and it was doubly so in this case, because there had previously been slight fulness at the left angle of the jaw, and because the position of the head and the contraction of the sterno-mastoid and trapezius simulated closely a rheumatic torticollis. Still, bearing in mind the possibility of such symptoms as rigidity of the neck and retraction or drawing to one side of the head being due to deep-seated inflammation of the retro-pharyngeal tissues, our only mode of avoiding an oversight is to examine the pharynx repeatedly in all such cases.

It is well, also, not to limit the examination to the interior of the mouth, but to search carefully along the course of the larynx for any sign of inflammatory swelling there, since, as was clearly shown in these columns by Parry,* many of the symptoms of retro-pharyngeal abscess may be also produced by abscesses connected with the walls of the larynx.

Difficulty in swallowing usually appears early and soon becomes extreme. It depends both upon the mechanical obstruction caused by the swelling, and upon the paralyzing effect of the inflammation upon the pharyngeal muscles. It is one of the most constant symptoms of retro-pharyngeal abscess, and has been observed in cases of abscess connected with the walls of the larynx. But in the case I have here reported there was no decided difficulty in swallowing at any time. This was undoubtedly due to the fact that the seat of suppuration was very high up, being in part above the level of the soft palate, and also well over to the left side of the pharynx. The fact of the absence of this important symptom is very interesting.

Difficulty of breathing is, as would naturally be expected, a very constant symptom, and deserves particular attention, since its peculiar characters are of much diagnostic importance. The swelling obstructs the pharyngeal and faucial space, and interferes with the entrance of air to the larynx; and in some cases, moreover, the abscess extends so low down that there is, in addition, direct pressure upon the posterior wall of the larynx. There is also more or less secretion of tenacious mucus,

which the child is unable to dislodge, and which adds seriously to the existing dyspnoea. It will be noticed, however, that the difficulty of breathing is, as a rule, limited to the act of inspiration, which is usually prolonged, noisy and snoring, and attended with violent effort; the muscles of the neck contract powerfully; the thorax is strongly elevated, and the base of the chest is markedly retracted. On the other hand, expiration is often quite easy and noiseless. When the child is placed in the recumbent position, it frequently happens, as in the case here reported, that the dyspnoea is greatly increased; and the same result follows any attempt to bend the head forward.

The cause of the marked difference between inspiration and expiration must be sought in the relations of the parts affected. During the powerful inspiratory effort, the larynx is firmly held back by the pressure of the surrounding muscles, and thus is encroached more seriously upon by the swelling which projects from the posterior wall of the pharynx. Fortunately, the seat of the abscess is usually about the level of the glottis, so that this effect is somewhat counterbalanced by the decided downward movement of the larynx in forced inspiration, which tends to remove it from the direct pressure of the tumor. In expiration, on the other hand, the tissues of the neck are relaxed, so that the larynx is able to move quite freely forward, and thus facilitate the exit of air. It is possible, also, that these influences are aided by the different relations of the pharyngeal swelling to the inspiratory current as it converges from the buccal cavity to the narrow glottis, and to the expiratory current as it more gently escapes from the larynx.

I have already alluded to the importance of this character of respiration in aiding the diagnosis of retro-pharyngeal abscess; and I will in this connection refer briefly to the affections with which it is most likely to be confounded.

Acute tonsillitis is met with not rarely in young children, and is attended with a painful swelling below the angle of the lower jaw, difficulty in deglutition, and obstructed breathing. This disease is, however, a primary one, and is much more acute in its onset than retro-pharyngeal abscess usually is; though in some cases of the latter affection the symptoms reach an alarming height in two or three days. The swelling is rather lower down, being over the base of the tonsil just *below* the angle of the jaw, and it is usually more considerable, the swelling which attends retro-pharyngeal abscess being frequently only a fulness *behind* the jaw. Still, the only sure and reliable means of diagnosis is, of course, the direct examination of the fauces, which, as I have already urged, should never be omitted in the examination of the acute affections of young children attended with dyspnoea, dysphagia, or swelling about the throat. This will at a glance reveal the true nature of the case; showing in the one the inflamed and swollen tonsil projecting towards the median line, and in the other, the less easily detected prominence on the posterior wall of the pharynx.

Still more important is it to note clearly the points

* Philada. Med. Times, June 14, 1873, p. 580.

of difference between pseudo-membranous laryngitis (true croup) and the affection we are considering. In both the appearance of the symptoms is rather gradual and insidious; and in both, when fully developed, there is urgent dyspnoea, with great restlessness and general distress. The recession of the base of the chest which is noticed in both of these affections during inspiration is common to all conditions where there is mechanical obstruction to the entrance of air into the larynx or bronchial tubes.

In membranous croup, however, there is no rigidity of the neck, and the head is not retracted or drawn to one side, as in the case here reported. Dysphagia is absent; and the difficulty in breathing, instead of being limited to inspiration as in retro-pharyngeal abscess, attends both inspiration and expiration, owing to the constant mechanical obstruction caused by the layers of false membrane in the larynx. There is also a much greater degree of suppression of the voice. Inspection of the fauces shows no swelling on the posterior wall of the pharynx, but reveals either a healthy state of the parts, or else the familiar lesions of pseudo-membranous angina.

In the rare cases of abscess connected with the cartilages of the larynx, the swelling may encroach seriously upon the calibre of that tube; respiration is accordingly terribly embarrassed, and here too the difficulty is usually limited to inspiration. In the cases reported by Parry, to which I have already referred, the difficulty of inspiration was extreme, and attended with marked recession of the base of the thorax. The head is retracted, and any attempt to bend it forward causes great increase of the dyspnoea. Deglutition may be much impeded, and inspection of the neck shows that the larynx is unusually prominent, and that there is swelling over the thyroid cartilages. Although at first sight such a case might be taken for one of retro-pharyngeal abscess, the diagnosis will be readily made by noting in addition the absence of fulness behind the angle of the jaw and of any prominence on the posterior wall of the pharynx. Dr. Parry describes the breathing in his cases as stridulous as in membranous croup; while in retro-pharyngeal abscess the respiration is rather noisy and stertorous.

I have dwelt at length upon the mode of recognition of this latter affection, because I am sure that its termination would be much more favorable than is usually stated, if a correct diagnosis were made at an early stage and proper treatment instituted.

In those cases where the abscess is connected with caries of the cervical vertebræ, the prognosis is, of course, more unfavorable, owing to the persistence and character of the cause.

So soon as the nature of the disease is recognized, a most careful and constant watch should be kept over the development of the symptoms and the progress of the abscess. Attempts may be made to prevent suppuration by applying, as I did in the case I have here reported, a pretty strong solution of nitrate of silver over the swelling; but it is not likely that our efforts will succeed. I would rather advise that hot poultices or fomentations should be

applied to the neck, to favor early suppuration. Great relief will also be afforded by the occasional use—once in three or four hours—of warm lime-water, thrown by a steam-atomizer into the fauces. This relaxes the parts, and favors the expectoration of the tenacious mucus which often collects there and further impedes respiration. In the present case it was used with manifest advantage. It will also be noted that on several occasions, when the dyspnoea became alarming, temporary relief was secured by producing emesis.

The most essential part of the treatment is the early opening of the abscess. We must not wait for any distinct tendency to point, since, owing to the character of the tissues, there is no such appearance presented in many cases. Whenever, therefore, the symptoms are growing somewhat urgent, a curved bistoury, with its blade guarded to within a half-inch of the point, should be fearlessly introduced into the swelling. No harm can follow from such an incision should it be premature and no pus have yet formed. If the symptoms persist and the swelling increases, it can readily be repeated when thought desirable; whereas it is in the highest degree important that relief should be afforded at the earliest possible moment.

It will be observed that in the present case but little pus escaped at first, but that on the next day, by pressing upon the swelling with the finger, a much larger quantity escaped. This precaution of gently pressing upon the swelling should be observed each day until the swelling has greatly subsided, since, even when there has been quite a free discharge, there is danger of the incision closing and the abscess being reproduced.

During the whole course of the treatment it is, of course, highly important that the strength should be maintained by the administration, so long as swallowing is possible, of quinia, stimulants, and concentrated nourishment. If deglutition is much obstructed, recourse should be had to the use of nutritious enemata, to which a moderate amount of quinia may be added.

1811 SPRUCE STREET.

FUSIFORM ANEURISMS OF ANTERIOR AND POSTERIOR TIBIAL ARTERIES—DIGITAL COMPRESSION—CURE IN THIRTY-SIX HOURS.

BY DE FOREST WILLARD, M.D.,

Surgeon to Out-Patient Department, Presbyterian Hospital.

THE following case is deemed worthy of record chiefly on account of the shape of the aneurisms, which rendered the formation of a clot much more difficult than in the sacculated form, where the force of the heart-beat is driven less directly upon the forming coagulum. In the present instance it was necessary to use great care at each change of the compressing fingers, since any relaxation of the calibre of the vessel above, was sure to send the current whirling through every portion of the tumor, displacing all fragments of hitherto stagnant blood. The case also adds to the rapidly accumulating evidence of the superiority of compression over the

ligature in a large proportion of cases. The ready cure of unfavorable cases, and its adaptability to aneurisms in which, at first sight, the treatment might seem to be inapplicable (vide Prof. Agnew's cure of aneurism of external iliac, *Philada. Med. Times*, 1875), both tend to render it most justly a favorite method.

S. T., æt. 66, shoemaker, was first seen on July 15, in consultation with Dr. M. O'Hara, the attending physician. Had been under Dr. O'Hara's care only a few weeks for an albuminuria of long standing, accompanied by slight dropsy. When first seen, was passing a moderate amount of pale urine, sp. gr. 1.012, which was one-quarter albumen, and contained numerous fatty and granular casts. Under treatment with mist. Basham, milk, etc., the albumen had decreased to one-twelfth, and the dropsy had entirely disappeared.

In June he commenced to complain of pains, resembling cramps, in both legs below the knees, which pains were not definitely located, but were of increased severity at night. Embrocations and friction failed to give relief. About July 1 he took a long walk, which fatigued him, but he states that he had no inconvenience from it until several days afterwards, and that he never experienced the sensation of anything "giving way." By the 4th, however, the pains became so severe as to compel him to keep his bed, save at night, when the torture necessitated his rising at least a dozen times to seek comfort for the moment by change of posture. He described his pain as almost unendurable, until electricity (interrupted current) was tried, when complete relief was experienced in the right leg, but the left continued in the same condition as before.

Upon the 10th, pulsation of the calf of the limb was noticed for the first time, and, upon closer examination, the presence of an aneurism was easily detected.

On the 15th, at the time of my first visit, the pulsation was most marked, the whole calf of the leg rising at each heart-stroke, the anterior muscles also vibrating, and the head of the fibula being distinctly driven outward at each beat. Notes taken at that time are as follows: The hand placed upon any portion of the leg from the insertion of the soleus upon the tendo Achillis, to the knee, feels most decidedly the characteristic thrill, while the fibula is forcibly thrust against the finger. There is no well-defined and limited tumor, but a general enlargement of the entire leg. The pulsation is strongest over the lines of the two main arteries, and the ear along their course plainly detects a loud bruit. There is no undue pulsation of the popliteal, nor do the thrill and bruit extend to that artery. The dilatation evidently commences just at the point where the bifurcation occurs, *i.e.*, at the lower border of the popliteus muscle, where the anterior tibial runs between the two heads of the tibialis posticus to pierce the interosseous membrane and reach the front of the leg. Both arteries are largely dilated, but apparently taper towards the ankle, where the normal calibre is resumed. Pressure upon either femoral or popliteal entirely arrests all pulsation, thrill, and bruit, and also relieves the pain. The swelling of the foot is but slight, yet the pressure is not only causing intense pain, but has already produced tingling and loss of power in the toes, especially those supplied by the musculo-cutaneous branch of the anterior tibial.

Strong flexion of the limb does not entirely arrest pulsation, and is extremely painful. There is no cardiac complication, but all the arteries are atheromatous, and, with the extensive renal disease, ligation would be at best dangerous.

Compression, therefore, was strongly advised, and was commenced upon the 17th, Prof. Agnew having

also been called and pronouncing decidedly in its favor.

17th. 12.15 P.M.—Commenced pressure upon femoral in Scarpa's triangle; Dr. O'Hara and myself having organized a corps of reliable co-workers. Pulse 96. Condition excellent.

[NOTE.—As many surgeons may be deterred from commencing digital compression from want of assistance, I would state that I am convinced, from some fifteen cases with which I have been connected, that it could be safely undertaken by four strong gentlemen, provided they had no other labors to perform. Six would be better (especially if the artery lay deeply covered by adipose and connective tissue), one-half sleeping while the others took their respective turns at holding the artery. After practice, one can, by changing from thumb to fingers, etc., keep up reliable pressure for from thirty to fifty minutes; but twenty is, perhaps, the most economical so far as permanency is concerned.]

17th. 4 P.M.—Left leg dry; right, moist; no perceptible difference in temperature. Pulse 84.

6 P.M.—Slight œdema of entire limb. Tissues over femoral "crackle" on pressure. Still dryer than right, and apparently warmer. Veins distended.

9 P.M.—Foot slightly cooler.

11.30 P.M.—Less œdema. Slight excoriation at seat of pressure; yet is more comfortable than before treatment was commenced, as the severe pain in the leg has been entirely relieved. Eats well.

18th. 12 A.M.—Beginning to be a little restless.

12.30 A.M.—Administered one-fourth grain morphia, hypodermically.

2 A.M.—Pulse 82. Dozes and sleeps; not suffering.

7 A.M.—Pulse 78. Foot quite cool. Leg and thigh greatly swollen. Tissues in Scarpa's triangle exceedingly sensitive and doughy; blistered at one point. Suffers much at change of fingers. Capillary circulation in foot slow. Thrill barely perceptible.

Pulse 82. Ate good breakfast, and is in good spirits; read paper. Now apply pressure at apex of triangle and in canal.

8 A.M.—No thrill.

9 A.M.—One-fourth grain morphia, hypodermically.

12 M.—Tissues greatly improved, and œdema lessened, as all pressure has been made low down in adductor canal for five hours. Has been dozing.

4 P.M.—Pulsation perceptible in articular branches.

8 P.M.—No pain. Temperature of limb nearly as other. Comfortable. Pulse 84.

19th. 12 A.M.—Pulse 94. Pulsation in tumor very faint; in fact, very doubtful if it exists at all. Hardening. Great pain over femoral, but condition and spirits good. Eats well, and dozes. One-fourth grain morphia, hypodermically. Good capillary circulation in foot and leg; œdema moderate.

12 P.M.—No pulsation in tumor.

3 A.M.—Pulse 78. Sleeping.

4 A.M.—Considerable pain, as tissues, even low down in canal, are becoming sore. Dilatation of articular branches at knee so great that slight pressure was made upon femoral above profunda, to limit but not control the circulation. One-fourth grain of morphia, hypodermically. Passes water often, and with difficulty.

5 A.M.—Dozing.

8 A.M.—Ate good breakfast. Cheerful. Not much pain; œdema slight. Temperature of limb good.

12.15 P.M.—Aneurism pronounced cured, but cautionary pressure to be continued until evening. No signs of pulsation below popliteal, although that artery beats quite strongly. No perceptible pulsation at foot in either anterior or posterior tibial; slight in articular branches at knee.

4 P.M.—œdema of leg more marked; surface colder;

capillary circulation, however, good. One-fourth grain morphia, hypodermically.

7 P.M.—Ceased compression. Placed limb in flexed position. No pulsation to be felt in any portion of leg below knee, nor over any artery there. Gave one-eighth grain morphia, hypodermically.

Summoned at 10 P.M. Reaction, together with morphia, had made him restless and delirious; tossing about; partly due to full bladder; drew three pints; gave fifteen grains chloral; slept soundly and quietly until morning.

20th. 10 A.M.—No pain; no pulsation. Pulse 96. During the day seized with diarrhœa, with fever and hot skin.

At 10 P.M., pulse 106; skin hot; tongue dry and brown; no chill; bowels loose, dark, and offensive; cannot pass urine—drawn with catheter. Gave two grains quinine and ten gtt. ol. terebinth. every three hours; paregoric after stools. Stopped Basham's.

21st.—Slept well. Tongue more moist. Pulse 96. Feels brighter. Diarrhœa ceased. No pulsation in tumor.

In evening, great pain from accumulation of urine; much suffering; passes a little himself, but not relieved; drawn; thick, turbid.

22d.—Slept well without medicine. Urine giving great suffering; drawn with catheter; thick with mucus and urates. Tongue moist. General condition good. Sat up in bed for the first time.

For the next few days Dr. O'Hara reports that he had a sharp attack of cystitis, which required the use of the catheter several times a day, but in a week or ten days this disappeared under appropriate treatment, and although the albumen in his urine had greatly increased during its continuance, yet it subsequently subsided, and by August 10 was scarcely perceptible.

He went about on crutches at the end of the third week, and in six was permitted to walk about; suffering no pain in the limb, and with no inconvenience, save the swelling and debility occasioned by the chronic Bright's disease.

September 15.—No evidence of any return of aneurism, but the kidney-disease is progressing, and renders him feeble and debilitated, although the œdema is but trifling. The aneurismal limb is weak, and use frequently gives pain, but the old seat of trouble remains the same as two months ago. No pulsation is perceptible over either the anterior or posterior tibials until they have almost reached the angle, at which point the pulse returned within three or four days after the cure. The popliteal beats as usual, but from the point of bifurcation to the ankle the occlusion seems perfect.

It will be noticed that all thrill ceased during the treatment at the end of twenty hours, and that pulsation stopped at thirty-six, but that pressure was continued until the end of fifty-five hours in order to prevent any displacement of the coagulum. The severe cramps in the legs mentioned above, which antedated the aneurism, were undoubtedly due to the debility, indigestion, etc., consequent upon the condition of the kidneys.

During treatment by digital compression it is very important that great care be exercised during the changing of fingers that the calibre be not relaxed, since the full force of the heart-beat would almost certainly disturb the forming coagulum. It is also advisable that a second person sit with his hand upon the tumor, to give notice of any relaxation upon the part of the holder, since continuous, equable muscular contraction is almost an impossibility, the pressure, however hard at first, gradually becoming insensibly less and less, until it not un-

frequently happens that the calibre is not more than one-half occluded, while the holder innocently supposes that he is pressing with the same amount of force as at the beginning, owing to benumbed sensation.

The following gentlemen kindly assisted in the cure of this case: Drs. Curtin, Buck, Treacy, Brunet, Evans, Gleason, Caldwell, Kerr, Skilling, Witmer, and Parks, and Messrs. Klapp, Walsh, G. C. Smith, Almeida, and Murray.

113 SOUTH SIXTEENTH STREET.

REMARKABLE PERSISTENCE OF CARDIAC ACTION AFTER CESSATION OF RESPIRATION.

BY R. STEWART, M.D.

THE verdict recently rendered by a jury at Dover, Delaware, that a child had an independent existence although it did not breathe, leads me to publish the following remarkable case. Shortly after its occurrence, I gave a detailed account of it before the Sydenham Medical Coterie of this city, and since then it has been referred to by Dr. Seyfert, in his article on "Living Issue," in the *Medical Times* of July 3, No. 192, vol. v.

On July 4, 1872, about five o'clock P.M., I was called to visit a gentleman nearly 72 years of age, who prior to that time had enjoyed ordinarily good health. During the forenoon he had walked to the Park and back, a distance of some ten or twelve squares, and when he reached home he complained of great fatigue, heat, and some pain in the head. Of his own accord he took the contents of a bottle of citrate of magnesia. After prescribing for him, I left; but before eight o'clock I was again summoned, and upon reaching the house, a few minutes afterwards, I was informed that the old gentleman had just expired. He had arisen to make use of the commode, and was found upon the floor, being unable to reach his bed again. After being placed in bed there was an involuntary action of his bowels, after which he gradually became insensible, and ceased breathing just as I entered the room. I found the jaw fallen, eyes fixed, body cool, and the head hot. After looking at him for a moment, I said, "Yes, he is dead." On applying my ear to the chest I distinctly heard the heart beating slowly, at the rate of about twenty-seven to the minute. I at once attempted artificial respiration by alternately raising the arms and pressing the sides of the chest together, and I blew air and ammonia-vapor into his lungs. I was surprised to find that under this treatment the heart-beats became more frequent and forcible, while a general rigidity was becoming very apparent. After a short time had elapsed, I placed a small mirror over his mouth, and, although I held it there for some time, making careful and repeated examinations of its surface, I could find nothing to indicate that he breathed.

At this time I was called away to another patient, and did not return until ten o'clock, when, upon making another examination of the chest, I readily detected the pulsations of the heart. By making

pressure upon the thoracic walls, squeezing the ribs together, and then allowing them to relax, the pulsations were again increased in rapidity and force. I then inflated the lungs by closing the nostrils and blowing into the mouth, raising the arms above the head, and expelling the air by pressure on the chest, etc. By a constant repetition of these efforts I at last increased the force of the heart to such an extent that a radial pulse became perceptible. To this fact I called the attention of those who were present. The head was still warm, but the body had grown colder and more rigid, and on this account it was becoming more difficult for me to continue my exertions. I went away at 11.45, and returning between one and two o'clock A.M., I found the heart still slowly beating. I endeavored to press the ribs together, but the rigidity was so great that I found it an exceedingly difficult task. I struck the chest quite forcibly over the region of the heart, and indented or pressed the ribs quickly downwards, which again increased the heart's action, but less than it did before. The jaws were now fixed, tongue stiff, and the arms stiffly extended by his sides. Getting upon the bed, I found that by placing my hands under his head I could raise the entire body without any signs of flexion, and I repeated this act several times. By thumping and pressing upon the chest, I kept the heart in quite regular motion until nearly four o'clock, when I went away.

On returning, between five and six o'clock A.M., I could hear a slight throb, but very slow, and could not increase it. I then left, and when I returned a little after eight o'clock, there were signs of decomposition, by appearance, odor, and lessening rigidity. He was evidently dead *now*; but was he dead before?

After twelve o'clock the heart was made to beat more rapidly by external manipulation only, and not by any vapor forced into the lungs. In fact, from the first, pressure upon the chest at once increased the heart's action. It may be suggested that I was observing the rhythmical movements of the muscles of the chest; but such movements could scarcely be regularly and constantly increased without a *visible* motion, and yet give an audible throb like that of the heart; and much less could such an action produce a *radial pulse*. Furthermore, if muscular excitation is admitted as being probable, why should we exclude the heart, which is one of the most irritable muscles of the body? If he was alive, then cadaveric rigidity may take place before death. If he was not alive, then this is a remarkable instance of retained irritability of the heart after death. Is not respiration the fundamental requisite of independent life? Is it not the first indication of independent existence? If this man breathed, he was alive; if not, we declare him dead, whether the heart was irritated into action or not.

A very charitable explanation may be given by assuming that I was mistaken in my observations. To this I reply that I know I was not. This was not a momentary condition, but one lasting long enough for a calm and most careful examination. If a similar case is not on record, it does not follow that none such have occurred, as only circumstances lead to the publication of this. But it may be that

some reader of this article may know of one like it, and, if so, this may lead to its publication. The statements being true, the question I would have answered is, *Was he alive?*

1838 GREEN STREET.

FAILURE OF BROMIDE OF IRON IN CHOREA.

BY CHARLES K. MILLS, M.D.,

Philadelphia,

Chief of Clinic for Nervous Diseases, Hospital of the University of Pennsylvania.

CHOREA, like the correlated disorder, rheumatism, has suffered many things of many remedies. It is certainly a disease which can be favorably influenced by different drugs and by various modes of treatment. Bromide of iron has lately been strongly recommended for it by Professor J. M. Da Costa. In a lecture on chorea, reported by Dr. F. Woodbury in the *Medical and Surgical Reporter* for January 30, 1875, referring to bromide of iron, Prof. Da Costa says, "Having now used it for three or four years, my experience from the treatment of a large number of cases giving abundant opportunity to witness its good effects induces me to like it better than any other one article in the treatment of chorea."

Since reading Professor Da Costa's remarks, I have tested the remedy in twelve cases of chorea, chiefly in the clinical service of Professor H. C. Wood, at the Hospital of the University of Pennsylvania, and have been entirely disappointed in the preparation. In no case was any permanent benefit derived from its use. In two instances slight apparent improvement was noted, but it was only transient in character. Much better results can be obtained from other salts of iron, and from other remedies, such as arsenic, cimicifuga, and the bromide of potassium.

It was usually given in plain syrup and water, commencing with five grains three times daily, as recommended, and rapidly increasing the dose to twenty. The treatment was continued from two to four weeks. Twenty grains very generally caused vomiting. It seems to be a remedy which quickly irritates the intestinal tract. In the case employed by Professor Da Costa to illustrate his lecture, this fact was noticed. The child under treatment became affected with a troublesome diarrhoea, requiring the substitution of bismuth for the iron, and several attempts to return to the bromide were foiled by this irritability of the digestive tract, which refused to tolerate the drug. Fowler's solution was finally given in its place.

Most of the cases in which the bromide of iron failed were afterwards cured either by arsenic, arsenic and iron, or cimicifuga, assisted by hygienic measures. In local chorea or clonic muscular spasm, for which this remedy is advised after the failure of other methods of treatment, I have not found it of any value. Very rarely indeed will any drug improve these local affections.

Dr. J. B. Rudderow informs me that he has used

the preparation under consideration without success in several cases of chorea.

In addition to the twelve cases of chorea referred to, I have also unsuccessfully employed the bromide in a few cases of hysteria and epilepsy. Theoretically, the combination of bromide and iron would appear to be a good one for the treatment of a neurosis like chorea, and it is well known that any of the numerous remedies which have been employed successfully in this disease may sometimes prove futile; but the failure of the bromide of iron has been so marked in my experience that I have thought it worth while briefly to call attention to the fact.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF HARRISON ALLEN, M.D.

Reported by Dr. JOSEPH BERENS, Resident Physician.

MULTIPLE FISTULÆ IN ANO—TREATMENT BY ELASTIC LIGATURE—CURE IN FOUR WEEKS.

CASE I.—P. W., æt. 39; Ireland; good family history. According to his own account of himself, he first had pain in the anal region two or three years ago; two or three months subsequent to this an abscess formed to the left of the anus, and in close proximity to it. This was opened by a physician, and there soon became established a fistula, which persisted for seven months, when it closed spontaneously. The closure of this was almost immediately followed by a second abscess, a little to the left of the coccyx, preceding another fistula, which still persists. These fistulæ were followed at irregular intervals by others which developed in succession, one a little posterior to the great trochanter of the left thigh, one in the perineum one inch anterior to the anus, a third on the left ischiatic tuberosity. These all gave vent to occasional discharges of feculent matter and wind, the latter often producing emphysema of the neighboring tissue.

Upon examination, the fistulæ were found to be of unusually large size, with orifices that did not pout, and occupying the positions enumerated above. The contiguous tissue was purplish in hue, very brawny, and at points presenting unequivocal evidence of emphysematous infiltration. Probing established communication of all the tracks with one another, and, after patient search, the instrument passed from the opening over the ischium into the rectum at a point just below the internal sphincter. A rubber ligature was attached to the probe, drawn through and out at the anus, secured by a bow-knot, and permitted to remain. Laxatives for the bowels were ordered, the ligature to be tightened as required. Two weeks after the operation an abscess appeared over the right ischium, which, when opened, discharged a large quantity of brown flocculent pus.

Upon the sixteenth day, aided in small degree by the knife, the ligature came away, leaving a healthy granulating wound. By the end of the third week the condition of the patient was rapidly improving; the abscess last mentioned had completely healed, the wound left by the ligature uniting rapidly, but the fistulæ still patulous,—a thin layer of tissue between the fistula and the rectum remaining intact. This was divided by a bistoury.

The end of the fourth week witnessed the termination of the case and the complete cure of the patient.

PERINEAL ABSCESS—URETHROTOMY.

Case II.—W. Y.; 43; Pennsylvania; entered the house suffering with a large circumscribed swelling in the perineum, which was somewhat red and warm to the touch, but yielded no sense of fluctuation.

The patient states that ten years ago he had a gonorrhœa, which was followed in the course of a year by a stricture. He placed himself under the care of a physician, and, with the occasional passage of a sound, suffered little inconvenience until two months ago, when, after a debauch, his stricture suddenly became very much worse. About two weeks ago he began to suffer pain, which was accompanied by a feeling of fullness and weight in the perineum. These symptoms were particularly severe in walking, subsiding almost entirely in the recumbent posture.

A whalebone filiform bougie was passed with no little difficulty, and over this a No. 14 (French) grooved catheter. The tumor was now laid open by an incision in the median line, carried from the scrotal border to within a half-inch of the anus; this gave vent to a quantity of laudable pus, after the evacuation of which the point of the knife was carried down through the urethral wall until it entered the groove in the staff, after which the urethra was laid open to the extent of an inch. This cut relieved the stricture, a large sound passing in readily.

First day after operation.—Patient doing well, passing water freely by the urethra.

Second day.—Water passing through the perineal aperture; patient very feverish.

Sixth day.—A No. 10 (French) soft catheter was the only instrument that could be introduced, and that with such difficulty that it was permitted to remain in the passage.

Eighth day.—The instrument removed, and a No. 24, which passed in easily, substituted.

Tenth day.—The instrument was removed, and, as there existed a tendency to irritability and spasm of the canal, no further dilatation was attempted at the time.

Thirteenth day.—Instruments have been introduced daily until, this morning, No. 27 was attained. The condition of the patient has been steadily improving; the wound in the perineum is closed, though not completely healed. The urine, which has been passing by the perineal opening in daily decreasing quantity, now comes entirely by the natural channel, and in an excellent stream.

Sixteenth day.—Patient well, with a urethra that readily admits a No. 27 (French) instrument.

STRICTURE—PERINEAL FISTULA.

Case III.—P. H.; 70; Ireland; admitted to the house suffering from an abscess in the perineum, which had ruptured spontaneously the day before, and was then discharging pus freely. In urinating he passed his water by the perineal orifice, none escaping by the penis.

He stated that he first had difficulty in urinating three years ago, since which time he has grown progressively worse. As the patient was reduced by exposure and starvation to the last extreme, and appeared to have a very tight stricture, nothing was done further than laying open the abscess by a free incision and placing him under favorable hygienic conditions. In a few days the patient's strength had improved so much that it was decided to make an attempt to treat his stricture. Patient search of half an hour, however, failed to secure the introduction of even a filiform bougie, and the attempt was desisted from. A week after, a small, probe-pointed sound was passed into the bladder, followed by larger ones until No. 8 (French) was reached. The seat of the stricture appeared to be just anterior to the bulbous portion of the urethra. Subsequently in-

struments were cautiously introduced every second day, gradually dilating the passage until it admitted a No. 20 (French) sound. Any increase in size beyond this producing profound constitutional disturbances, it was thought best to rest here, and merely prevent any retrogression. Meanwhile, the urine had begun to pass by the penis, and the abscess in the perineum to heal. In the course of a month this improvement advanced to complete recovery as to the abscess and resulting fistula, and a decided amelioration in the general condition of the patient, both as to his stricture and general condition.

GONORRHOEAL RHEUMATISM.

Case IV.—Wm. McF.; 49; Ireland; entered the house three months ago, suffering from a gonorrhœa of two weeks' standing, which at the time of his admission was particularly severe. The day following, an attack of rheumatism supervened, beginning in the right ankle and gradually extending till many of the points of the body were affected, and, with exacerbations and remissions, has persisted ever since. The gonorrhœa, also, has been subject to fluctuations in severity, and seems to have borne a relative proportion to the rheumatism. Thus, on July 4 the gonorrhœa, which had been manifesting itself by a profuse discharge, suddenly disappeared almost completely, following which there was an as sudden exaggeration of the rheumatic symptoms. On the morning of the 11th the patient remarked, "The rheumatism is getting well; but, doctor, the clap is running awful." In truth, the rheumatism had nearly subsided, while there was a profuse purulent discharge from the urethra, with a red and inflamed meatus. On the 31st the patient was again down with the rheumatism, synchronously with a marked subsidence of the gonorrhœa. A turpentine vapor-bath was ordered, to be followed by a blanket pack. In the afternoon there was an evident improvement in the rheumatism, while the gonorrhœa had resumed nearly its former severity. Until about the middle of August, when all the symptoms began to subside, there existed a marked and unmistakable correlation between the two diseases from which the patient suffered; the severity of the one being generally in the inverse ratio to that of the other, neither ever completely disappearing, but each in turn being more or less pronounced or in abeyance.

AMPUTATION OF THE LEG.

Case V.—John McG.; 22; Delaware; temperate; was run over by the cars on August 16, at 9.30 P.M. He was brought to the house in the ambulance two hours later. On admission, he was suffering from moderately developed shock, and had injuries which comprised a crush of the right ankle-joint, which had produced a compound comminuted fracture, involving the lower end of the tibia, and the tarsal bones, with large openings opposite each malleolus, through which protruded the fragments; in addition, there were two incised scalp-wounds, one of them four inches in length, crescentic in shape, and attended with considerable separation of the scalp from the skull.

Amputation was decided upon, and the operation begun immediately. Ether was administered, Esmarch's bandage applied, antero-posterior semicircular skin-flaps were made, and the two bones divided at the junction of the lowest and third quarter of the leg. But little hemorrhage ensued. The vessels were secured by silk ligatures, after which heavy silk sutures were introduced through the flaps and the wound left open for some fifteen or twenty minutes, when it became glazed. The flaps were then adjusted, secured by the sutures, which were tied in bow-knots and supported by adhesive strips, so arranged as to prevent any dropping down of the anterior flap upon the end of the

tibia, the end of which had been carefully rounded off. A dry oakum dressing was then applied. The scalp-wounds were apposed by interrupted silver sutures, and the patient put to bed between blankets and surrounded by cans of hot water.

The leg was placed upon a pillow, adapted to give further support to the flaps and so prevent pressure. An ounce of whisky and a quarter of a grain of morphia were administered.

For the first few days succeeding the operation, the patient had a slow pulse, with stupor and other indications of injury to the nervous centres. At the end of this time, however, there was very marked improvement in his general condition.

Fifth day.—As there had been little or no discharge, the adhesive strips were removed for the first time to-day. The stump was found looking admirable, with almost complete healing by first intention.

Ninth day.—Several of the ligatures came away. There is, however, well-defined heat and swelling over the point of the tibia. Dr. Allen ordered the suspicious point painted night and morning with tincture of iodine, and, as a further precautionary measure, additional support given to the flaps by placing upon the posterior aspect of the limb, far up near the popliteal space, the initial end of a piece of adhesive plaster four inches wide by two feet long. This strip was designed to so support the posterior flap as to relieve the dragging of the anterior flap upon the spine of the tibia. The free end of the strip was pulled strongly upward over the face of the stump, and fixed to the transverse wooden support for the bedclothes. This simple contrivance *swung the entire limb by the posterior flap a few inches above the level of the mattress.* Its effect was to *wrinkle* the anterior flap, at once relieving all pressure. The redness over the tibial spine disappeared, and a threatened danger of slough was averted. To relieve jactitation, two lateral strips were applied from the knees downward, and a weight applied to them as in the treatment of fracture.

The scalp-wounds healed by first intention.

Thirteenth day.—All the sutures and ligatures but one have been removed at intervals since the last note. The device for preventing the sloughing of the flap over the tibia has been entirely successful.

Sixteenth day.—By daily twisting of a rather resistant ligature, and the fastening it so as to retain the twist, it has been gradually severed from its attachments, and to-day came away without difficulty.

Seventeenth day.—Patient well.

TRANSLATIONS.

THE CONJUNCTION OF CHLOROSIS WITH APLASIA OF THE FEMALE GENITAL ORGANS (E. Fraenkel: *Archiv für Gyn.*, vii.; from *Schmidt's Jahrbücher*).—Fraenkel reports two cases, as follows. 1. A servant-girl, aged 26, who was of powerful frame, had never menstruated, and presented some symptoms of chlorosis. Her heart was of normal size, and no râles could be detected by auscultation, but a microscopic examination of the blood showed a marked diminution of the number of red blood-corpuscles. Her breasts were infantile in character, and the pelvis diminished in all its diameters and of masculine form. The labia majora were entirely wanting, the nymphæ but slightly developed, while, owing to a want of development, the hymen was wanting. The uterus was very small, and its walls quite thin, and the presence of ovaries could not be distinctly ascertained.

2. A girl of 20 years of age, who, in childhood, had scar-

latina and cholera. The first menstruation was profuse, and occurred in her seventeenth year, and the performance of this function was attended by fainting, dyspnoea, and palpitation of the heart. The face was pale, the extremities chilly, and there was pneumonia of the apices. The heart was small, its impulse weak, while the pulse was thin and thready. The genitals resembled those of a girl of seven or eight years, the mons being without hair, the uterus small and infantile in character, and the breasts small.

Fraenkel concludes that chlorosis is often combined with defective development of the genital organs, but not always with defective development of the heart and aorta. Sexual aplasia may be the first cause of chlorosis, but chlorosis, when the heart is not of small size, is permanently curable. Menorrhagic chlorosis occurs as well when the sexual apparatus is defective as when it is excessive in its development. W. A.

ON THE ASSIMILATION OF STARCHY FOOD BY INFANTS (Dr. J. Korowin: *Schmidt's Jahrbücher*; from *Jahrb. für Kinderheilk.*, viii. 4).—This question is not only of great physiological interest, but is also of the highest practical importance, since all the substitutes for mothers' milk which have as yet been recommended contain starch in larger or smaller amount. Dr. Korowin had great trouble even with very young children in collecting a sufficient quantity of saliva for his purpose by introducing a sponge in the mouth after it had been carefully cleansed. He found that towards the end of the second month the saliva increased most markedly in quantity, and that this increase continued during the following months. The reaction of the fluids of the mouth when this cavity had not been scrupulously cleaned was strongly acid, and, after it had been carefully washed, slightly acid or neutral, but rarely weakly alkaline. The first experiments were made with the saliva of children varying in age from half an hour to nine days, and revealed almost invariably a distinct trace of sugar. Experiments with children of rather more advanced age showed that the fermentative power of the saliva increased with the age of the child. The greatest quantity of sugar was not found until fermentation had been going on for about two hours.

Experiments with the contents of parotid glands which had been excised also gave evidences of a sugar-making power. Similar experiments with the secretion of the pancreas from children who had died during the first three weeks gave negative results, and the power of inducing fermentation became gradually noticeable at a later period, but remained feeble up to the end of the first year. W. A.

INTESTINAL OBSTRUCTION SUCCESSFULLY TREATED BY THE INJECTION OF SODA-WATER INTO THE LARGE INTESTINE (Guyon: *Centralblatt für Chirurgie*, No. 34, 1875; from *Journal de Méd. et de Chir. prat.*, 1875).—The patient, a man aged 62 years, had an inguinal hernia which had been reduced after symptoms of incarceration had made their appearance. Some hours later, vomiting set in, which soon became fecal in character, and was accompanied by symptoms of collapse. An œsophageal catheter was introduced into the rectum to an extent of forty centimetres, and through this the contents of two siphons (the contents of the first in great part escaping) injected into the intestine. Colic of a marked character soon came on, which was followed by the evacuation of stinking fluid matter, and this, in turn, by hard fecal masses; and after the expiration of two hours the patient was out of danger.

Béhier in one and Bouchut in ten cases of intestinal obstruction from impacted masses of feces, employed the same treatment with good success. In all the cases the abdomen swelled on the introduction of the gas,

producing colic of intense character, which was soon followed by evacuation of the bowel and consequent relief. W. A.

ETIOLOGY OF SCORBUS (Felix: *Centralblatt für Chirurgie*, No. 34, 1875; from *Gaz. Méd.*, 1875).—In view of the noticeable fact that scorbutus is becoming of less frequent occurrence in Western Europe, while in the east, and especially in Russia and Roumania, it has every year new victims, Prof. Felix of Bucharest turned his attention to the subject, and in 1871 pointed out the relation of the increase of the affection with the diminution of fat in the food allowed during the protracted and strict fasts of the Greek Church. The faithful among the Greek Christians nourish themselves during their periods of fasting exclusively with vegetables and oils of vegetable origin. These oils, however, on account of their high price, are not eaten by the poorer classes, and but rarely by soldiers and the inhabitants of prisons, and it is among these very classes of the population that scurvy breaks out a short time before or after the great religious festivals. In accordance with this theory he prescribes, instead of the usual diet for such patients, one rich in fats, and aids its effects by the administration of cod-liver oil. W. A.

EXTIRPATION OF A MYOMA OF THE BLADDER AFTER THE LATERAL AND HIGH OPERATION FOR LITHOTOMY (C. Gussenbauer: *Archiv für Klinische Chirurgie*, 1875; from *Centralblatt für Chirurgie*, No. 28, 1875).—In a boy aged 10 years, Billroth, after repeated and careful examinations, diagnosed a tumor of the bladder of the size of a man's fist, which had been developed during the previous ten months. In order to remove the tumor the usual lateral incision into the bladder was made, and it was found that it lay on the posterior wall of the bladder. The sectio alta was then made, the recti muscles cut obliquely at their insertion, and the wound in the bladder enlarged in the same direction. The attachments of the tumor were torn off with the fingers, and, the bladder having been moderately inverted, the pedicle of the tumor, which was found to originate in the muscular tissue of the vesical walls, was excised. A drainage-tube was placed in the wound of the bladder, and recovery took place in about four weeks. A microscopic examination of the tumor revealed the characteristics of a myoma. W. A.

PROLAPSUS OF THE RECTUM, AND ITS TREATMENT BY THE DOUCHE ON THE ANUS AND PERINEUM (De Saint-Germain: *Centralblatt für Chirurgie*, No. 34, 1875; from *Journal de Méd. et de Chir. prat.*, 1875).—In cases of prolapsus of the rectal mucous membrane in children, in which all other means, even the actual cautery, had been used, a cure was effected by reducing the protruded portion and allowing a strong stream of water to play upon the anus and perineum. The douche was repeated daily. The duration of treatment in the gravest cases was fifty-eight days, and relapses did not occur.

In the case of an adult who suffered from prolapsus recti with hemorrhoids, forty-eight sittings sufficed for a cure. W. A.

A RARE CASE OF MYOMA OF THE UTERUS (P. Sturm: *Centralblatt für Chirurgie*, No. 34, 1875; from *Archiv der Heilk.*, 1875).—The patient was a woman aged 49 years, and the tumor a cystic myoma of colossal dimensions, which was supposed to be ovarian in its character, and an operation for its removal was begun. The operation was, however, suspended, and at the post-mortem examination, which was made soon afterwards, a large myoma was found, which originated at the fundus of the uterus and grew up between the two layers of the mesentery of the small intestine. W. A.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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PUBLISHERS' NOTICE.

THE present number concludes the fifth volume of the PHILADELPHIA MEDICAL TIMES. With the publication of the next number, beginning the sixth yearly volume, the issue of the TIMES will be made bi-weekly, being published every other Saturday. This change is made with a double purpose: first, to secure a reduction in the price of the journal (to \$4 per annum), a change which seems expedient in view of the financial condition of the country; secondly, to enable the editors to give more time to its editorial management than has hitherto been possible, on account of the frequency of the issue. The editors are confident that, as a bi-weekly, the subscribers, while receiving their journal with sufficient frequency to keep themselves *au courant* with medical progress in the world, will find the original department filled with material which, in practical interest, will be above the average of that which has hitherto appeared in its pages.

During the five years of its existence the TIMES has won at home and abroad a high reputation,—flattering alike to contributors and to editors,—to maintain and enhance which no efforts will be spared. The publishers desire to express their appreciation of the support that has been extended to their journal, and trust that its merits will secure to it a continuance of the same.

The form of the TIMES will be changed slightly, and each number will embrace twenty-four pages (instead of sixteen as hitherto), enclosed in a neat cover.

CORRESPONDENCE.

BOSTON, September 12, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The meetings of the American Pharmaceutical Association, the twenty-third annual session of which has just been held in this city, possess a twofold interest, for they are of practical value to the druggist and manufacturer of chemicals, at the same time that they suggest to the physician refinements and improvements in the preparation of medicines that may be a guide to him in prescribing.

As the objects of this Association may not be generally known, I may state that its aims are to unite the educated and reputable pharmacists and druggists of the United States in the following objects: To improve and regulate the drug market, by preventing the importation of inferior, adulterated, or deteriorated drugs, and by detecting and exposing home adulterations; to encourage proper relations between druggists, pharmacists, physicians, and the people at large, which shall promote the public welfare, and tend to mutual strength and advantage; to improve the science and art of pharmacy, by diffusing scientific knowledge among apothecaries and druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, and encouraging home production and manufacture; to regulate the system of apprenticeship and employment, so as to prevent, as far as practicable, the evils flowing from deficient training in the responsible duties of preparing, dispensing, and selling medicines; to suppress empiricism, and to restrict the dispensing and sale of medicines to regularly educated druggists and apothecaries, etc. Pharmacists and druggists in good standing, and teachers of pharmacy, chemistry, and botany, who may be especially interested in pharmacy and materia medica, are eligible to membership. A handsome volume of transactions is annually issued: the proceedings being faithfully recorded by the official phonographic reporter of the Association.

This body has undoubtedly given a great stimulus to the onward progress of pharmacy. Previous to 1851, there were only three teaching schools of pharmacy in existence in this country. Now there are more than a dozen, with a total of six or seven hundred students, in addition to numerous pharmaceutical associations in the various States. The national Association has an active membership of about one thousand; but this will probably be annually increased by the addition of several hundred others, as there are from fifteen to twenty thousand persons in the United States who are eligible. The educated German element is a notable feature in these gatherings; and it is assuredly no disparagement to home talent in this direction to repeat the universally recognized fact that this infusion adds depth, force, and steadiness to the labors of the Association. Business is conducted in a somewhat different style from that pursued in the American Medical Association, there being no division into sections, and no

general addresses, and the new President being elected and assuming his duties at an early period of the meeting, instead of at its close. Reports from several standing committees on matters of vital moment are read and discussed, and numerous queries are proposed, to be answered at the next annual meeting. These, and volunteer essays, all of which may provoke an interesting agitation of views, fill up the time of the Association. The amount of actual labor accomplished is enormous, and the representation of earnest, enthusiastic, educated workers is proportionally greater, I am disposed to think, than conventions usually offer. From a general glance at the calibre of this representative body, I would cordially subscribe to the sentiment expressed by one speaker, that the day has passed when the apothecary is likely to ransack his shelves in a vain effort to fill a prescription for *℞iv* of *aurora borealis* ordered by a quizzical prescriber.

The first general business transacted was the delivery of the address of the retiring President, C. Lewis Diehl, of Louisville, who is also the reporter on the Progress of Pharmacy for the Association. Much of his address was devoted to an appreciative recognition of the labors of the pharmacist and to a brief mention of the assistance which chemistry had lately given him, and a historical sketch of some comparatively recent remedies, as digitalin, jaborandi, and salicylic acid.

The Association keeps a watchful eye lest members may enter it who are not constitutionally qualified; so that when the name of Prof. S. P. Sharples, of Boston, who is Professor in the Dental College, State Assayer, etc., was proposed, it met with slight opposition on merely technical grounds, although in the course of his chemical experience he is frequently called upon to examine and report on pharmaceutical articles.

The officers elected for 1875-6 were the following:

President,—George F. H. Markoe, of Boston.

Vice-Presidents,—Fred. Hoffman, of New York; T. Roberts Baker, of Richmond; C. F. G. Meyer, of St. Louis.

Treasurer,—Charles A. Tufts, of Dover, New Hampshire.

Permanent Secretary,—John M. Maisch, of Philadelphia.

Reporter on the Progress of Pharmacy,—C. Lewis Diehl, of Louisville, Kentucky.

Executive Committee,—George W. Kennedy, Pottsville, Pennsylvania; Joseph L. Lemberger, Lebanon, Pennsylvania; William McIntyre, Philadelphia; Charles A. Heintsh, Lancaster, Pennsylvania; John M. Maisch, Permanent Secretary, *ex officio*.

Committee on Papers and Queries,—William Saunders, Ontario, Canada; Emil Scheffer, Louisville, Kentucky; James H. Taylor, New York.

Business Committee,—Jacob D. Wells, Cincinnati; Paul Balluff, New York City; William C. Bakes, Philadelphia.

As almost every national representative body of medical, pharmaceutical, and educational interests is to

meet in Philadelphia during the centennial year, it was fair to presume that a favorable opportunity for an international conference of pharmacutists was offered; but the invitation extended by this Association to the Fifth International Pharmaceutical Association, when it recently met at St. Petersburg, was not accepted or refused, but left, as usual, for the Executive Committee of that body to decide, a preference being expressed for London, the meeting possibly not to take place until after a lapse of five years. At the close of that meeting, the members took measures to further the draft prepared by the Paris Pharmaceutical Society, and agreed not to recommend the preparation of extracts by evaporation *in vacuo*; to make a thorough examination into the fluid extracts of the United States Pharmacopœia; and to constitute 59° Fahr. the uniform temperature at which to take the specific gravity of all liquids. The pharmacists of the United States are expected to participate in this enterprise, the progress of which will be watched with much interest by the medical profession.

The Association at Boston would have had a difficult task before it had it attempted, in the report of its Committee on Unofficial Formulæ, to endorse the numerous formulæ which are employed in various parts of this country in the preparation of extracts, elixirs, etc. It was wisely determined that it should be understood that those reported were only collected and printed for general reference; but there is another committee, on elixirs, to whom the portion of the report relating to such preparations was referred, although, in the expressed desire to do away with the whole elixir business, it was doubtless thought that a double-barrelled shot would be twice as effective as one from a single barrel only. The Committee on Elixirs must have been still more puzzled when they had to decide on recommending formulæ for their preparation, for almost every apothecary and every wholesale dealer or manufacturer has numerous specimens of this class of elegant preparations to which he prefixes his own name as distinctive and separate elixirs from all others advertised by rival pharmacutists. It was suggested that some clue to their composition should always be given in the name adopted, and also that a more thorough knowledge of the various syrups, aromatics, spirits, etc., which they contain, would give a more ample field for the choice of auxiliaries, correctives, and vehicles. The importance of co-operation with physicians on these subjects was recognized by several of those who took part in the discussion, for it was deemed absolutely useless to suggest formulæ unless they were to be viewed favorably by medical men, who alone were to prescribe them.

One of the most important reports presented was that on adulterations and sophistications, by the chairman, Dr. W. A. Miller, of Philadelphia. Essential oils are largely adulterated, and many so-called distilled oils are almost absolutely fraudulent. Cases were mentioned where commercial oils, such as those of cedar, spruce, etc., were prepared by placing branches of those trees

in the still, with an amount of turpentine proportioned to the anticipated price which the manufacturer expected to obtain. Europe was catching the contagion of systematic fraud, and processes had been devised there for cheapening all the prominent oils, and an effort was being made to adopt them here. A representative of a foreign house had informed him that all the cheap grades of lavender, rosemary, and red thyme sent to this country by a number of manufacturers contained at least seventy-five per cent. of turpentine. Linseed oil was known to be adulterated with hemp, fish, rosin, and mineral oils; castor oil was found to be composed of lard and croton oil, etc.

Many of the States have adopted pharmacy laws for the protection of the public, by imposing restrictions as to the admission of pharmacists without sufficient examination, and other measures calculated to improve the tone of the profession. Some of these have been tested before the courts, and their constitutionality sustained. Great annoyance has been caused to druggists by the imposition of a stamp-tax upon the preparations sold by them, but they have been relieved from much of their embarrassment by the construction placed on one of the sections of what is known as the "Little Tariff Bill," by which no tax is imposed on medicinal articles prepared by a manufacturing chemist, pharmacist, or druggist in accordance with a formula published in any standard dispensatory or pharmacopœia in common use by physicians and apothecaries, or in any pharmaceutical journal issued by any incorporated college of pharmacy, when such formula and where found shall be distinctly referred to on the printed label attached to such article, and no proprietary interest is claimed therein; and no stamp is to be required when the formula of any medicinal preparation is printed on the label attached to such article and no proprietorship is claimed.

The desire which authors of valuable papers often experience to give them greater publicity than they receive in the annual volume of the proceedings was partially gratified by the passage of resolutions inviting pharmaceutical and medical journals to publish whatever notes they may desire to make of the proceedings and of the papers presented; and giving their authors the privilege, when they have prepared copies or abstracts of their essays previous to the meeting of the Association, of distributing such copies or abstracts at any time subsequent to the official reading of their papers, the fact being stated at their head that they had been so read.

The manufacturers of gelatin-coated pills must have been seriously discomfited at the results arrived at by Prof. Joseph P. Remington, of Philadelphia, in his examination of the solubility of the various forms of pills kept upon the shelves of the apothecary. We trust that further investigations may be made on the same subject. He found that gelatin-coated pills were the least soluble of the four forms examined, which, expressed in order of greatest solubility, were the simple uncoated pill, the sugar-coated pill, the compressed form, and the gelatin-

coated. It is an undoubted fact that an old sugar-coated pill presents, after the coating has worn away by long keeping, a much moister surface than that offered by a venerable non-coated pill; and that in cases where the sugar-coated pill has been passed through the bowels unchanged by any chemical action in the digestive apparatus—for such cases have been described—some faulty condition has sometimes existed in the individual rather than in the want of power of solution of the pill.

I overheard some amusing instances of physicians' blunders in writing prescriptions detailed in conversation, for such subject seemed to be a fruitful theme of entertainment, each relating his experience in this respect, sometimes in a vein of self-satisfaction that he was able to detect the error. The possibility of mistakes being committed between the passage of a prescription from the hands of the prescriber and into the patient's possession was recognized officially in the Association in a communication from the Philadelphia College of Pharmacy, and in a paper presented by Mr. T. R. Baker, of the Richmond delegation, suggesting proper precautions, and in the passage of a resolution in accordance with a committee report on the subject of maximum doses, authorizing a committee of conference with the American Medical Association. The medical and pharmaceutical professions of Richmond were to consult together "on the importance of writing prescriptions in a legible hand, without erasures or interlineations; of using the technical language and abbreviations of the Pharmacopœia and the U. S. Dispensatory; of writing directions for use and dose as a guide to the dispenser in case of error in quantity of any active ingredient; also that when an unusual dose of an active and potent medicine is prescribed, the prescriber should affix a caution-mark to inform the dispenser that he is aware that the dose is unusual; that the words *not renewable* should be added in appropriate cases; and that the sale of opium and its preparations, chloral, etc., should be stopped, unless sold on competent medical authority."

One of the most interesting features of these gatherings is the elaborate report presented by C. Lewis Diehl, of Louisville, on the progress of pharmacy. To be sure, it is too lengthy to be read in full at the annual meeting, for in the completeness and intrinsic value of its researches it rivals the best productions on similar subjects that emanate from the most indefatigable of European workers and writers; but the members are able at their leisure, and to their great instruction, to peruse in the annual volume the great mass of facts he has collected in the several hundred pages occupied by him. He purposely avoided more than a passing allusion to points of therapeutic value associated with the various subjects, and, in the different sections into which his report is divided, considered the progress during the year of pharmacy; materia medica, giving such information as has been obtained in regard to the history of crude drugs and their botanical characteristics; inorganic chemistry, with the results of investigations of inorganic substances; organic chemistry, and a review

of the works relating to these subjects during the year.

It was rather a humiliating confession that Prof. John M. Maisch had to make in his remarks on the sale of patent medicines, that, in spite of the professed opposition of the Association to this traffic, the sale must go on because the public called for them. This was doubtless founded on the view that some one must sell them, and why should we (the apothecaries) not derive the profit from their sale? It will always be a stumbling-block in their path of progress, however, that they must continue to sell these numerous specimens of quackery, of whose composition they are usually ignorant, and thus sacrifice principle to the demands of trade. They took somewhat of a middle course, however, by agitating the dissemination of some form of health-almanac, similar to those published by proprietors of patent medicines, containing analyses of these compounds when such could be obtained. But in the mean while they will continue to sell them.

The unwarranted sale of diplomas without attendance on lectures has been so fruitful a source of evil in the medical profession that we are not surprised to see our pharmaceutical friends boldly grappling with it on the first occasion that offers. It appears that some one who wished the degree wrote to the Tennessee College of Pharmacy, and received a letter from the Secretary and acting Treasurer of that institution, offering to examine and graduate him without attending the lectures. On motion of Prof. Bedford, of New York, a resolution was passed inquiring whether such action was authorized by the College or was only the act of the officer referred to. It seems that while other colleges confer the degree of Graduate in Pharmacy, this Western institution claims that it confers a still higher degree when it bestows that of Doctor of Pharmacy. By the most reliable pharmacutists this is considered an unnecessary degree, inasmuch as the other is in itself sufficient, and the title of doctor opens the way for the practice of medicine by the apothecary, the public being very readily deceived by that prefix. The Secretary of the Tennessee College was present, and boldly claimed a higher rank for that institution on account of its advanced degree, and explained the meaning of his letter to be an expressed willingness to confer the title of doctor on graduates of other institutions without requiring attendance on all the lectures. We hope, for the honor of the Association, that this matter will be thoroughly sifted.

I wish it were in my power to give you an abstract of the large number of valuable essays presented, and the discussions which followed. There was hardly one of these contributions to pharmaceutical literature that did not give evidence of good work and practical progress in the advance of pharmacy. Under such investigations the physician will be constantly benefited by having placed in his grasp the results of improved processes of manufacture of remedies. Quite a number of essays, for instance, were read on phosphorus and its forms of administration, new methods of preparing phosphoric acid, etc. The antiseptic properties of chloral were

corroborated in a paper on the subject by Mr. T. R. Baker, of Virginia. Pancreatin was said, in an essay by Prof. Emil Scheffer, of Louisville, to be destroyed when taken into the stomach, and it, therefore, in his view, could have neither physiological nor therapeutic effect when administered internally. Mr. Charles Bullock, of Philadelphia, read an essay of great practical moment on the preparation of the bromides of the organic and inorganic bases used in American pharmacy. Prof. Sharples urged the importance of adopting the metric system of weights and measures, to save all the trouble the pharmacist now has in mixing by one scale and selling by another.

The members of the Association were very bounteously entertained by their Boston friends. This body will hold its next session in Philadelphia on the second Tuesday of September, 1876. In connection with the meeting at Boston, a very elaborate exhibition was made of all kinds of pharmaceuticals, chemicals, druggists' sundries, rubber goods, etc., etc. I understand that one of our Philadelphia manufacturers was insured for twenty thousand dollars' worth of articles exhibited; while a case of ambergris which, to the uninitiated, appeared an unpretending display, was said to be valued at fifteen thousand dollars. The Massachusetts College of Pharmacy was the recipient of a rare and valuable collection of crude drugs from a New York firm, each bottle being labelled with its scientific and common name, the part used, the botanical source, and locality where produced; and also of a herbarium containing over three hundred specimens, collected by Prof. Gunther of the University of Jena.

R. J. D.

REVIEWS AND BOOK NOTICES.

THE DISEASES OF THE HEART AND OF THE AORTA.
By THOMAS HAYDEN, Fellow of the King and Queen's College of Physicians. Lindsay & Blakiston, Philadelphia, 1875.

This handsomely-printed work is apparently composed of imported sheets, bound so as to form two volumes of over six hundred pages each, although numbered consecutively from 1 to 1232. The author evidently has had a very wide and well-used experience in that of which he writes, is well versed in modern physiology and pathology, and holds a fluent pen. Consequently, the book is an excellent one, and, as the teachings of the text are abundantly illustrated by the reports of about one hundred and fifty cases, Dr. Hayden's effort will probably attain the popularity it deserves. Personally, we confess to a preference for what may be considered the hammered style of writing, in which everything is as condensed as possible: therefore the treatise of Walshe in our library shall stand above that of Hayden. But to the large class who prefer less of strength and conciseness, and more of elegance and fluency, we can heartily commend the volumes before us. The chief and indeed the only complaint we have to make is, the apparent ignorance of the author of the German tongue and of much of the treasures that lie hidden beneath its barbarisms. For this almost national fault he makes what amend is possible by a thorough acquaintance with the literature of Eng-

land, America, and seemingly also of France. We think, however, that if he were better acquainted with the German writers he would concerning certain matters not purely clinical have adopted a rather different tone. As an example, we may cite the muscular degenerations of typhus and other fevers originally discovered by Zenker, which Dr. Hayden, by inference, would lead one to believe existed rather in the brain of the observer than in the muscles of his subjects. We do not mean, however, to disparage the treatise in hand: concerning all clinical matters Dr. Hayden writes like one who speaks with the authority of personal knowledge, and the book must prove a useful one.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS.
Third Series, Vol. I.

This is really the eighth volume of Transactions which our College of Physicians has published, and, as the product of the work of a single year, it is a very creditable as it is a very valuable volume, which is composed of a series of papers that have already appeared in the columns of this journal, either as abstracts or in full. It is evident that any further notice of these papers would be superfluous, and we leave them with the remark that nearly all of them are of the highest character, and that one or two of them must achieve a place among the medical classics of the language,—papers which physicians a hundred years from now will go back to, precisely as we now refer to some of the original productions of Hunter, Abercrombie, and others. We wish the College all success in its new undertaking, and express the hope that it may long retain, as it has ever held, the foremost position among the most influential and productive medical societies in the United States..

GLEANINGS FROM OUR EXCHANGES.

IVY-POISONING (*The Boston Medical and Surgical Journal*, September 2, 1875).—Dr. James C. White describes the effect of the poison of rhus, and cautions those who are unacquainted with the plant to avoid any vine or bush growing by rocks, fences, and woodsides and having glossy leaves arranged in threes. He says there is no danger of contagion by contact with the eruption upon another person. In regard to treatment, as the poison is a volatile acid, an alkali would therefore suggest itself as the most fit agent to counteract its action. Thorough washing of the parts, as soon as possible after contact with the poison, in cooking-soda or saleratus-water, or in strong soap-suds, especially those of soft soap, which contains an excess of alkali, is therefore the best primary treatment. When these or other alkaline preparations are not to be obtained, an abundance of water alone should be used as soon as possible. After absorption has taken place or the eruption has begun to show itself, less benefit is to be expected from such applications alone. Remedies are then to be used which will best control and shorten the inflammatory process in the tissues of the skin,—those, in fact, which are found to be most efficacious in corresponding stages of acute eczema. Among these are some which have a special reputation, as solutions of acetate of lead or sulphate of copper, applied frequently as a wash. Perhaps nothing is better than common black wash used as an evaporating lotion for half an hour at a time, twice daily, the lime-water acting also as a chemical antidote, if possibly such action is still in season at this later stage. In the intervals between the applications of these washes the parts may be kept covered with cold-water dressings, with plasters of diachylon ointment, or with a powder of starch and oxide of zinc, according to the

rules familiar to physicians for the treatment of acute eczema. By these means the process is checked and shortened, and the sufferings of the patient are greatly alleviated.

CARCINOMA (*New York Medical Journal*, September, 1875; from *Med.-Chir. Centralblatt*, 20, 1875).—Prof. Von Nussbaum, after treating over one thousand cases of cancerous disease, has arrived at the following conclusions:

1. Cancer is a proliferation of the epithelium, which progresses rapidly, and crowds out the connective-tissue stroma, undergoes ulceration from slight causes, determines local destruction, induces severe general illness from hemorrhages and discharges, and finally disseminates its particles throughout the whole body, and generates an identical proliferation and destruction in various organs, and thus destroys life.
 2. Its causes are found in advanced age, grief and care, and when there is a disproportion between epithelium and connective-tissue,—warts, cicatrices, glandular swellings, etc.; and, lastly, those tissues are more especially affected which are subjected to frequent irritation, though not placed in a condition of acute inflammation. Cancer is not congenital or contagious. At first it is a purely local disease, which only becomes a dyscrasia by the dissemination of its elements throughout the body.
 3. The humoral infection must be distinguished from the dyscrasia. The former can disappear entirely, and never contra-indicates the operation.
 4. Recurrence of cancer is either continuous, when cancerous elements have remained, or regnary, when neighboring tissue disposed to cancerous disease has remained; or it may be a recurrence by transplantation, when cancerous particles have been disseminated by passing into the circulation through opened vessels.
 5. Cancer can be cured radically by early and extensive operation.
 6. Exact and extensive statistics show that patients who are operated upon live longer than those who refuse all interference.
 7. In the treatment, all remedies which act on the tissues, blood, and nerves, come into consideration. Early and extensive operation ranks first. Caustics are often useful, especially after the cancer has been scooped out. Parenchymatous injections deserve trial.
- A NEW INSTRUMENT IN THE OPERATION FOR VESICO-VAGINAL FISTULA (*New York Medical Journal*, September, 1875).—Dr. William A. Byrd, having had trouble, in some cases of vesico-vaginal fistula, to distinguish the red and protruding wall of the bladder from the surrounding tissues, has employed the following method of overcoming the difficulty. He takes two ordinary toy rubber balloons, slips one inside of the other so as to gain additional strength, and fastens their necks over a piece of elastic tubing. At the time of the operation a wire is passed into the bladder through the urethra and out through the fistula into the vagina, the end being bent back so as to protrude from the vulva. It is then attached to the flexible tube fastened to the balloon, and is made to retrace its course, bringing the end of the tube out of the meatus urinarius, and leaving the balloon in the bladder. The wire is then detached, the nozzle of a syringe inserted in the tube, and the balloon slowly filled with water. Dr. Byrd claims the following advantages for this instrument. 1. The material is inexpensive, and the apparatus can be easily made in a short time. 2. It is easily dilated with any ordinary syringe, when it defines the fistula perfectly, throwing the walls of the fistula prominently out from the convex surface of the balloon, which renders the paring more speedy, certain, and easy. 3. It prevents the posterior wall of the bladder from interfering with the

operation. 4. It prevents blood flowing into the bladder and there clotting and giving trouble. 5. It allows the sutures to be more rapidly inserted, and more easily placed at proper distances from each other. 6. By pressure and the temperature of the distending fluid, it represses hemorrhage. 7. When undistended it occupies a very small space. 8. It can readily be applied as a tampon in cases of metrorrhagia.

ANÆMIA (*The Lancet*, August 7, 1875).—Dr. Julius Pollock calls attention to that form of anæmia which is met with in young unmarried women and is usually associated with some disorder of the catamenial function. He relies chiefly upon steel to effect a cure; but if the tongue is coated and the digestion much impaired, the more astringent forms of iron, such as the sulphate or the perchloride, are often not tolerated at first; and the ammonio-citrate, the *mistura ferri comp.*, or the *ferrum redactum*, will be the best to begin with. In a large number of cases he has found nothing so successful as a combination of the ammonio-citrate of iron and rhubarb in suitable doses, with equal parts of some bitter infusion and peppermint-water. Sometimes the addition of two or three grains of the carbonate of ammonium seems to be useful. He makes rather a point of the rhubarb, although it is so disagreeable to take, believing it to assist the action of the steel, especially when the stomach is out of order. If the patient is very nervous, ten grains of the bromide of potassium may be added with advantage to each dose of the mixture. If the rhubarb in the mixture does not act enough upon the bowels, it will be necessary to prescribe some aperient pill to be taken at bedtime. Preparations containing aloes are of service, and may be combined with steel. Pepsine is often useful with the meals. The diet should be light and simple; beer had better be avoided in most cases, and a glass or two of light claret may take its place with advantage. Claret is certainly better than port, although that wine is so often recommended. A moderate amount of exercise out of doors, when the weather permits, should be insisted upon, but anything like fatigue must be avoided. A tepid bath in the morning and a rub down afterwards with a rough towel is a good thing. In a few weeks, more or less, the steel and rhubarb mixture may be left off, and fifteen drops of the solution of perchloride of iron given after each meal in a wineglass of water.

AN IMPROVED METHOD OF OBTAINING SUPPORT FOR FRACTURED BONES OF THE EXTREMITIES (*New York Medical Journal*, September, 1875).—Dr. S. Wackerhagen uses the following method in treating fractures of the long bones:

After replacing the fragments as accurately as possible (extension being maintained by assistants), the limb is smoothly bandaged with cotton wadding, prepared in the form of an ordinary roller; a flannel bandage spread with dry plaster of Paris, and rolled, is now soaked in warm water (to which are generally added about two fluidounces of saturated solution of sulphate of potassium), and applied to the limb, over the wadding, by circular and reversed turns. One layer of the flannel applied in this way is amply sufficient for support.

When we wish to inspect the point of fracture, the dressing, which is only about an eighth of an inch thick, is easily cut through by a pair of curved scissors.

If it be desired to employ lateral splints, the dressing should be cut in the median line of the anterior and posterior surfaces. If antero-posterior support is preferred, it should be cut through the lateral surfaces. The splints should now be varnished on their inner and outer surfaces with shellac, or this preparation may be applied to the outer surface before removal.

The shellac seems to permeate the dressing sufficiently

to increase the strength of the splint, and at the same time renders it slightly flexible instead of brittle, as is the case when plaster of Paris is used alone.

CASE OF TRANSFUSION IN DIABETES MELLITUS (*The Cincinnati Lancet and Observer*, September, 1875).—Dr. C. Shriver reports the case of a man, æt. 48, who had been affected for four years with diabetes, and who had become greatly emaciated and very weak. All the usual remedies had failed entirely, when it was determined to try transfusion. This was performed by the direct method, about twenty-five ounces of blood from the common carotid artery of a three-months-old lamb being thrown into the median basilic vein of the patient. The phenomena observed during the transfusion were oppression of the chest, irregularity and quickening of the heart's action, cough, vertigo, perspiration, and intense pain across the lumbar region, disappearing in a few minutes. The results were much more favorable than were expected. He has nearly regained his health, has a good appetite, sleeps well, only rises at night once instead of ten or twelve times to urinate, and is apparently on the road to complete recovery.

GALLIC ACID IN ALBUMINURIA FOLLOWING SCARLATINA (*The American Practitioner*, August, 1875).—Dr. J. T. Jameson reports two cases of albuminuria occurring as a sequel of scarlet fever, and in which he employed gallic acid with marked success. In one case, a child æt. 6 years caught cold during convalescence, and a day or two after the face became oedematous; there was pain in the head, and slight fever; the urine was quite bloody, and on testing in the usual manner presented considerable coagulation. The patient was put upon a saturated solution of gallic acid, a teaspoonful every two hours. In seven days the urine was free from albumen and copious in quantity, and the child seemed well, with the exception of debility, for which the muriated tincture of iron was prescribed. About ten days after this, in consequence of fresh exposure to cold, there was a slight relapse, the urine becoming again bloody and the face puffed; but on resuming the gallic acid for a few days these symptoms speedily subsided, and the recovery became permanent. In this case the gallic acid was administered unaccompanied by any other medicine, except an occasional dose of castor oil to regulate the action of the bowels.

CATHETERISM IN LACERATION OF THE URETHRA (*The Lancet*, August 21, 1875).—Mr. Teevan reports two cases of retention of urine from laceration of the urethra, and remarks that if a laceration or false passage existed in the floor of the deep portion of the urethra, a curved metal catheter ought to be passed, as it could be made to hug the roof of the urethra, and so avoid slipping into the *cul-de-sac* in the floor. If, on the contrary, the laceration were in the roof, a straight elastic catheter ought to be introduced, as it always tended, when passed, to keep to the floor of the urethra, and would thus escape becoming locked in any rent in the roof of the canal.

MISCELLANY.

AMERICAN DENTISTRY IN 1796.—The following is a copy of an advertisement issued in 1796 by one Josiah Flagg, surgeon dentist, who

"Informs the public that he practices in all the branches with improvements, [i. e.] Transplants both live and dead Teeth with great conveniency, and gives less pain than heretofore practiced in Europe or Amer-

ica: . . . Sews up Hare Lips: . . . Cures Ulcers: . . . Extracts Teeth and stumps or roots with ease: . . . Reinstates Teeth and gums that are much depreciated by nature, carelessness, acids, or corroding medicine: . . . Fastens those Teeth that are loose (unless wasted at the roots); regulates Teeth from their first cutting to prevent fevers and pain in children; assists nature in the extension of the jaws, for the beautiful arrangement of the second Set, and preserves them in their natural whiteness entirely free from all scorbutic complaints. And when thus put in order and his directions followed (which are simple), he engages that the further care of a *Dentist* will be wholly unnecessary; . . . Eases pain in teeth without drawing; . . . Stops bleeding in the gums, jaws, or arteries; . . . Lines and plums Teeth with virgin Gold, Foil or Leads; . . . Fixes *gold Roofs and Palates* and artificial Teeth of any quality, without injury to and independent of the natural ones, greatly assisting the pronunciation and the swallow when injured by natural or other defects. A room for the practice with every accommodation at his house, where may be had Dentifrices, Tinctures, Teeth and Gum Brushes, Mastics, &c., warranted approved and adapted to the various ages and circumstances; . . . also Chew-sticks, particularly useful in cleansing the fore Teeth and preserving a natural and beautiful whiteness; which Medicine and Chew-sticks are to be sold wholesale and retail, that they may be more extensively useful.

"* * Dr. Flagg has a method to furnish those Ladies and gentlemen or children with Artificial Teeth, Gold Gums, Roofs, or Palates, that are at a distance and cannot attend him personally.

Cash Given

for Handsome and Healthy Live Teeth
at No. 47, Newbury-Street, Boston (1796)."

The document is ornamented in one corner by very formidable and antiquated instruments, while in the other are to be seen tooth-brushes quite of the modern pattern. It has been preserved by a descendant of one who, as may be seen on the back, purchased a brush and tincture from Josiah Flagg in the year 1800.—*Boston Medical and Surgical Journal*.

THE FEAT OF CAPTAIN WEBB, which has been so fully reported in the secular press, is certainly one of the most remarkable instances of physical endurance, if not the most remarkable, on record. In a recent number of *The Lancet* (September 4), his brother, Mr. Thomas Low Webb, M.R.C.S., gives the following report as to his condition on leaving the water:

"He assures me that on landing he did not feel at all cold, but was as warm as when he started. He felt, however, fearfully tired and exhausted, and was very sleepy. He fell asleep several times as he was being driven to his hotel, though roused repeatedly by his cousin (Mr. G. H. Ward, who never left him throughout), who thought it best not to let him sleep until he had taken some nourishment. At the Hôtel de Paris, he went to bed, and drank some hot wine. Immediately on getting to bed he took his own temperature with a thermometer with which I had provided him,

and found it to be exactly 98° Fahr. He did not count his pulse, but *felt* it, and says it was 'slower than usual.' After five hours or so of sleep, he awoke feeling rather hot and feverish. He then took his temperature again, when it had risen to 101° Fahr. He says that his face was then flushed, and his skin hot and dry. He then slept again for some time, and on waking felt himself 'all right,' excepting a troublesome stiffness of the arms and legs, scarcely to be wondered at.

"Towards the termination of his swim he became nearly blind from the salt water. At present he is perfectly well in every respect,—indeed, as well as ever he was; for we must not consider the abrasions on his neck caused by the salt water to be of any account. That he is apparently *not one whit the worse* is an immense relief and satisfaction to me, and a further proof of the perfection and soundness of his circulatory system and constitution generally."

NOTES AND QUERIES.

WINONA, MINN., Sept. 15, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

I transmit herewith a slip from the *Chicago Times* (daily), September 14, 1875, to show one of the many ways by which "quacks" are made M.D.'s nowadays.

Very respectfully yours,

FERDINAND LESSING, M.D.

FOR SALE.—A physician (regular) leaving practice, will sell his diploma. Address O, Times office.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 13, 1875, TO SEPTEMBER 20, 1875, INCLUSIVE.

MILHAU, J. J., SURGEON.—Relieved from duty at Fort Columbus, New York Harbor, and granted leave of absence for six months. S. O. 183, c. s., A. G. O., September 11, 1875.

SMITH, A. K., SURGEON.—Relieved from duty in Department of the Missouri, and assigned to duty at Fort Columbus, New York Harbor. S. O. 183, c. s., A. G. O., September 11, 1875.

HEGER, ANTHONY, SURGEON.—Relieved from duty in Department of Dakota, and assigned to duty at Willett's Point, New York Harbor. S. O. 182, c. s., September 9, 1875.

HEGER, ANTHONY, SURGEON.—By S. O. 177, Headquarters Department of Dakota, September 13, 1875, upon being relieved from duty by Surgeon Byrne, will comply with requirements of S. O. 182, from War Department, relieving him from duty in Department of Dakota.

BYRNE, C. C., SURGEON.—By S. O. 177, Headquarters Department of Dakota, September 13, 1875, relieved from duty at Fort A. Lincoln, D. T., and assigned to duty at Fort Snelling, Minn., relieving Surgeon Heger, U.S.A.

BROOKE, JOHN, ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of the South, for assignment to duty. S. O. 182, c. s., A. G. O., September 9, 1875.

BROOKE, JOHN, ASSISTANT-SURGEON.—By S. O. 132, Headquarters Department of the South, September 13, 1875, to report to the Commanding Officer, Raleigh, N. C., for duty at that post.

MONROE, F. LeB., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, to report to the President Army Medical Board, for examination for promotion, and upon its completion, to the Commanding General, Department of Dakota, for assignment to duty. S. O. 182, c. s., A. G. O., September 9, 1875.

BYRNE, C. B., ASSISTANT-SURGEON.—Relieved from duty at Willett's Point, New York Harbor, to report to the President Army Medical Board, New York City, for examination for promotion, and upon its completion, to the Commanding General, Department of Texas, for assignment to duty. S. O. 182, c. s., A. G. O., September 9, 1875.

HARVEY, P. F., ASSISTANT-SURGEON.—By S. O. 182, Headquarters Military Division of the Atlantic, September 13, 1875, granted leave of absence for one month, on surgeon's certificate of disability.

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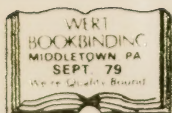
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